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SMITHSONIAN INSTITUTION

Fiscal Year 1974

Justification of Estimates of Appropriations To the Office of Management and Budget



ADMINISTRATIVELY CONFIDENTIAL

(Information not to be released until after the President's
Budget is submitted to the Congress in January 1973.)

FY 1974

SMITHSONIAN INSTITUTION

Salaries and Expenses

Summary of the 1972 and 1973 Appropriations and the 1974 Estimates

	Page	FY 1972			Pos.	FY 1973			Pos.	FY 1974		
		Pos.	MY	Amount		Pos.	MY	Amount		Pos.	MY	Amount
Assistant Secretary for Science	6	9	9	\$ 170	9	9	9	\$ 123	9	9	9	\$ 127
National Museum of Natural History	7	335	305	5,676✓	358	328	328	6,442	418	388	388	7,933✓
Smithsonian Astrophysical Observatory	14	57	57	2,653✓	57	57	57	2,999	68	68	68	3,700✓
Smithsonian Tropical Research Institute	20	52	50	843✓	58	52	52	906	124	67	67	1,349✓
Radiation Biology Laboratory	22	46	40	1,105✓	48	46	46	1,354	50	48	48	1,546✓
Office of Environmental Sciences	24	32	31	682✓	33	35	35	719	35	36	36	770
Chesapeake Bay Center for Environmental Studies	26	10	10	160✓	10	10	10	140	19	19	19	373✓
National Air and Space Museum	28	44	42	754✓	56	56	56	1,070	91	91	91	2,192✓
Center for the Study of Man	31	10	8	202✓	12	10	10	243	15	13	13	328✓
National Zoological Park	32	286	249	3,827✓	286	272	272	4,166	322	308	308	4,970✓
Fort Pierce	36	-	-	-	-	-	-	-	3	3	3	100✓
Subtotal, Science		881	801	\$16,072	927	875	875	\$18,162	1,097	1,050	1,050	\$23,388
				36.9				35.2				1.7
Assistant Secretary for History and Art	37	9	9	\$ 221	9	9	9	\$ 184	10	10	10	\$ 209
National Museum for History and Technology	39	155	137	2,457✓	161	150	150	2,835	171	160	160	3,787✓
National Collection of Fine Arts	42	72	59	1,221	75	70	70	1,396	80	75	75	1,810
National Portrait Gallery	44	39	40	924	43	48	48	1,052	47	52	52	1,418
Hirshhorn Museum and Sculpture Garden	48	21	21	623	23	23	23	1,166	42	42	42	1,400
Freer Gallery of Art	51	8	4	78	14	13	13	186	16	15	15	292
Archives of American Art	53	11	9	193✓	11	10	10	190	13	12	12	243✓
National Armed Forces Museum Advisory Board	55	6	6	131✓	6	6	6	134	6	6	6	136✓
Smithsonian Archives	56	6	5	81	7	7	7	107	10	10	10	151
Subtotal, History and Art		327	290	\$ 5,929	349	336	336	\$ 7,250	395	382	382	\$ 9,446
				12.2				14.2				
Assistant Secretary for Public Service	57	6	6	\$ 147	6	5	5	\$ 106	10	10	10	\$ 183
Anacostia Neighborhood Museum	60	15	10	206	18	13	13	267	23	18	18	327
Office of International Activities	62	9	9	140	9	9	9	155	11	11	11	201
International Exchange Service	64	9	9	147	9	9	9	160	10	10	10	185
Division of Performing Arts	65	7	7	265	9	9	9	303	12	12	12	416
Office of Public Affairs	67	12	13	372	12	16	16	281	15	18	18	337
Smithsonian Institution Press	68	25	24	816	25	24	24	810	27	26	26	935
Subtotal, Public Service		83	78	\$ 2,093	88	85	85	\$ 2,082	108	105	105	\$ 2,584
				4				3.8				
Assistant Secretary for Museum Programs	70	9	4	\$ 250✓	9	8	8	\$ 319	10	9	9	\$ 347✓
Conservation Analytical Laboratory	71	13	11	195✓	14	13	13	269	24	23	23	465
Office of Exhibits Programs	72	158	140	2,580✓	158	138	138	2,552	183	163	163	3,517
Office of the Registrar	74	31	27	323✓	32	31	31	373	32	31	31	379
Smithsonian Institution Libraries	75	59	48	864	63	61	61	1,058	80	78	78	1,343
Smithsonian Traveling Exhibition Service	77	-	-	-	-	-	-	-	7	7	7	115✓
National Museum Act	81	3	3	600✓	3	3	3	798	3	3	3	1,000✓
Subtotal, Museum Programs		273	233	\$ 4,812	279	254	254	\$ 5,369	339	314	314	\$ 7,166
				10.4								

Page	FY 1972			FY 1973			FY 1974		
	Pos.	MY	Amount	Pos.	MY	Amount	Pos.	MY	Amount
American Revolution Bicentennial Program	83	2	\$ 356	2	2	\$ 754	2	2	\$ 1,987
Environmental Sciences Program	85	8	268✓	8	10	273	8	10	425✓
Major Exhibition Program	87	-	525✓	-	-	749	-	-	950✓
Academic and Educational Programs	88	22	15	23	19	729	29	25	989
Research Awards	91	-	425✓	-	-	450	-	-	550✓
Subtotal, Special Programs	32	25	\$ 2,227	33	31	\$ 2,955	39	37	\$ 4,901
Administrative and Support Activities									
Office of the Secretary	93	22	\$ 391	24	24	\$ 425	28	28	\$ 520
Office of General Counsel	94	9	213	10	10	192	12	12	250
Office of the Treasurer	95	33	647	35	33	754	38	36	831
Office of Personnel	97	32	471	35	32	534	40	37	639
Office of Audits	98	5	116	6	6	107	8	8	139
Office of Equal Employment Opportunity	99	3	64	3	3	63	6	6	121
Photo Services Division	100	26	368	29	27	520	36	34	600
Information Systems Division	102	14	267	17	17	322	22	22	421
Supply Division	105	21	365	21	21	404	24	24	463
Management Analysis Office	106	10	168	10	11	186	14	15	242
Other	107	10	165	10	10	147	12	12	195
Subtotal, Administrative and Support Activities	185	174	\$ 3,235	200	194	\$ 3,654	240	234	\$ 4,421
Buildings Management	109	789	\$10,442	851	797	\$12,161	1,098	1,044	\$14,447
TOTAL	2,570	2,332	\$44,810	2,727	2,572	\$51,633	3,316	3,166	\$66,353

SMITHSONIAN INSTITUTION

FISCAL YEAR 1974 ESTIMATES OF APPROPRIATIONS

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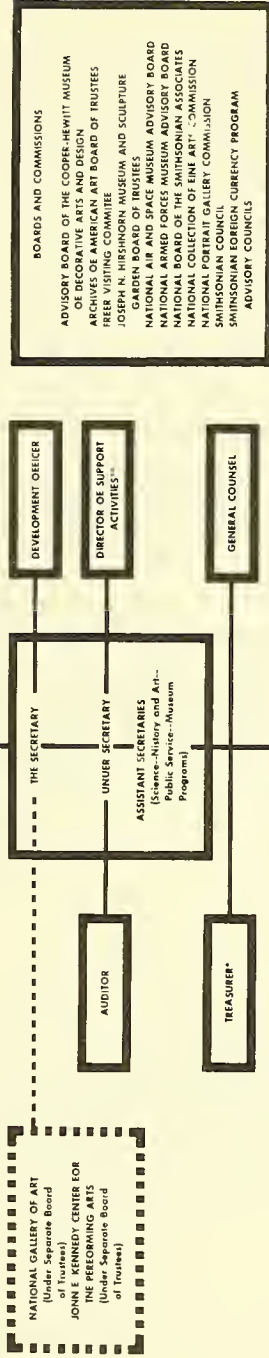
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SMITHSONIAN INSTITUTION

BOARD OF REGENTS



BUREAUS AND ACTIVITIES

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

(Under Separate Board of Trustees)

SCIENCE

CENTER FOR THE STUDY OF MAN
NATIONAL AIR AND SPACE MUSEUM
NATIONAL MUSEUM OF NATURAL HISTORY
NATIONAL MUSEUM OF NATURAL HISTORY
NATIONAL MUSEUM OF NATURAL HISTORY
OFFICE OF ENVIRONMENTAL SCIENCES
RADIATION BIOLOGY LABORATORY
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
SMITHSONIAN SCIENCE INFORMATION EXCHANGE, INC.
SMITHSONIAN TROPICAL RESEARCH INSTITUTE

HISTORY & ART

ARCHIVES OF AMERICAN ART
COOPER-HEWITT MUSEUM OF DECORATIVE ARTS AND DESIGN
FREER GALLERY OF ART
JOSEPH N. HIRSHORN MUSEUM AND SCULPTURE GARDEN
JOSEPH N. HIRSHORN MUSEUM AND SCULPTURE GARDEN
NATIONAL ARMED FORCES MUSEUM ADVISORY BOARD
NATIONAL COLLECTION OF FINE ARTS
SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE
RENWICK GALLERY
NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY
NATIONAL PORTRAIT GALLERY
OFFICE OF ACADEMIC STUDIES
OFFICE OF SEMINARS
SMITHSONIAN ARCHIVES

PUBLIC SERVICE

ANACOSTIA NEIGHBORHOOD MUSEUM
BELMONT CONFERENCE CENTER
DIVISION OF PERFORMING ARTS
OFFICE OF ELEMENTARY AND SECONDARY EDUCATION
OFFICE OF INTERNATIONAL ACTIVITIES
OFFICE OF PUBLIC AFFAIRS
OFFICE OF PUBLIC AFFAIRS
SMITHSONIAN INSTITUTION PRESS
SMITHSONIAN MAGAZINE
SMITHSONIAN MUSEUM SHOPS

MUSEUM PROGRAMS

SMITHSONIAN AND NATIONAL MUSEUM PROGRAMS
CONSERVATION ANALYTICAL LABORATORY
OFFICE OF EXHIBITS PROGRAMS
OFFICE OF THE REGISTRAR
SMITHSONIAN INSTITUTION LIBRARIES
INTERNATIONAL EXCHANGE SERVICE

*FINANCIAL SERVICES

ACCOUNTING
BUSINESS MANAGEMENT

INVESTMENTS
PROGRAMMING AND BUDGET

**SUPPORT ACTIVITIES

ADMINISTRATIVE SYSTEMS
BUILDINGS MANAGEMENT

CONTRACTS
DUPLICATING

EQUAL EMPLOYMENT OPPORTUNITY
INFORMATION SYSTEMS (ADP)

PERSONNEL ADMINISTRATION
PHOTOGRAPHIC SERVICES

SUPPLY
TRAVEL SERVICES

APPROVED SEPTEMBER 29, 1971
S. DILLON RIPLEY
SECRETARY

SMITHSONIAN INSTITUTION
SUMMARY OF APPROPRIATION ACCOUNTS

(In thousands of dollars)

	Appropriated FY 1972	Appropriated FY 1973	Increase Sought	Request 1973
Salaries and Expenses	\$44,701	\$ 51,633	\$ 14,720	\$66,353
Science Information Exchange	1,600	1,600	300	1,900
Museum Programs and Related Research (Special Foreign Currency Program)	3,500	3,500	5,500	9,000
Construction Accounts:				
Construction and Improve- ments,				
National Zoological Park	200	675	4,125	4,800
Restoration and Renovation of Buildings	550	5,014	2,141	7,155
Construction	<u>1,900</u> ^{1/}	<u>40,000</u> ^{2/}	<u>-40,000</u>	<u>...</u> ^{3/}
Grand Total	\$52,451	\$102,422	\$-13,214	\$89,208

1/ Plus \$3,697 liquidation of contract authority

2/ \$13,000 in new obligational authority plus \$27,000 in contract authority

3/ Plus \$27,000 liquidation of contract authority

SMITHSONIAN INSTITUTION

FISCAL YEAR 1974 ESTIMATES OF APPROPRIATIONS

GENERAL STATEMENT

In September 1971 the Smithsonian Institution celebrated its 125th anniversary. Our growth and public service contributions over this period have been noteworthy. The Institution now maintains public exhibits in eight buildings representative of the arts, American history, aeronautics and astronautics, technology, anthropology, and the natural sciences. The Renwick Gallery of American design and crafts joined this distinguished company in January 1972. The National Zoological Park presents living animal exhibits. We preserve for reference, exhibit, and study millions of items of scientific, cultural, and historic importance. Research is performed throughout the world in a wide range of the natural and physical sciences and in the history of cultures, technology, and the arts. We present performances of American folk arts and crafts in order to help keep alive the rich cultural traditions of the Country. Education programs are conducted throughout the Institution and in schools at all academic levels. Publication, information, traveling exhibition, and neighborhood museum programs help to bring the wealth of Smithsonian resources to those persons unable to visit our major museums and our research laboratories.

The management of this complex organization places unusual demands on identifying, implementing, and reviewing needed management initiatives. In recognition of this, over the past year the Smithsonian has taken the following steps:

1. Within the Office of The Secretary it has created a focus for identifying and internally reviewing emerging issues which impact on the longer-range development of the Institution's programs.
2. A mechanism has been established whereby bureau and organizational staff are provided an opportunity to participate constructively in deliniating Institutional options related to the growth issues.
3. Investigative work has been assigned to key research, technical, and administrative teams in selected areas of activity; the objective of the assignments is a thorough assessment of current Institutional operating modes involving many program areas with high public visibility such as exhibits, protection of the National collections, and general public services.

Through this effort, the Institution hopes to be able to keep abreast of, and to incorporate many of, the rapid-fire management changes occurring today in the museum community, government, industry, and educational institutions. Such an effort is required if the Institution is to continue to meet effectively its responsibilities to the public.

Goals

The Smithsonian's FY 1973 budget presentations identified a number of continuing goals and objectives. These remain valid and provide the context for consideration of our budget requirements for the coming year. For FY 1974, the Institution is requesting the following appropriations:

	FY 1973 Base	FY 1974 Estimate	Difference
Salaries and Expenses	\$ 51,633,000	\$66,353,000	\$+14,720,000
Science Information Exchange	1,600,000	1,900,000	+300,000
Special Foreign Currency Program	3,500,000	9,000,000	+5,500,000
Construction	45,689,000 ^{1/}	11,955,000	-33,734,000
	\$102,422,000	\$89,208,000	\$-13,214,000

^{1/} Includes \$27,000,000 of contract authority for which liquidation funds are requested in the FY 1974 budget.

Highlights of the Smithsonian's goals and program plans are as follows.

Support the quality of the professional staff effort within the Smithsonian to sustain the basic scholarly program.

The attainment of this objective depends largely on achieving adequate levels of technical and financial support for our scientists and historians to enable them to maintain collections and perform research in art, history, and science. With the close backing of the President and the Congress, the Institution made a substantial breakthrough in its FY 1972 and FY 1973 appropriations by winning additional technician, electronic data processing development, and research equipment funding. Notable developments are the attainment of improved support funding for the National Museum of Natural History, funding for the Smithsonian Astrophysical Observatory's multi-mirror telescope, and the provision of laboratory outfitting of the Radiation Biology Laboratory in its new research facility. The general program of phased correction of deficiencies in technician, equipment, and other support remains a high priority in the FY 1974 budget request.

Sustain and develop the Smithsonian's educational contributions

We are an institution for communicating with the public at large. To do this we perform a dual educational role. By making our collections, library, and research facilities available to students and to pre- and post-doctoral visitors who work under the supervision and guidance of our professional staff, we offer a rich variety of resources and perspectives available for productive research and training in scientific and humanistic endeavors. In turn, these students and visiting researchers bring an infusion of knowledge and vitality to our own research efforts.

Our second role is to make our exhibits more useful to elementary and secondary schools as provocative supplements to classroom instruction. We do this through guided tours and the preparation and distribution of traveling exhibits, classroom use publications, and other home and classroom audio and visual materials.

The FY 1973 budget will permit slight expansion of the school tour and program of service in the schools represented by the work of our Academic and Educational Programs units and by the efforts of our museums and galleries, notably the National Collection of Fine Arts and the National Portrait Gallery. We hope to expand this effort in FY 1974 keeping in mind also the emerging needs of the Hirshhorn Museum and Sculpture Garden and the National Air and Space Museum. In addition we would like to augment our higher education program now on a virtual plateau, and to increase the research dissemination program through the Smithsonian Press.

Contribute to the reappraisal of the American Experience by portraying our Nation's course over the past 200 years and suggesting paths for our continued development

The Smithsonian Institution will play a central and major role in the celebration of the Bicentennial of the American Revolution. We welcome the challenge and believe that our program, which has as a theme The American Experience, will meet all expectations. We will offer imaginative and exciting events and, at the same time, we will make contributions that will continue to reward the general public and the scholarly community for many years to come. The Bicentennial undertaking at the Smithsonian will involve almost every department. Key exhibits, research, and outreach roles will be played by the National Museum of History and Technology, the National Collection of Fine Arts, the National Portrait Gallery, the Division of Performing Arts, the Anacostia Neighborhood Museum, and the Center for the Study of Man with its monumental Encyclopedia of North American Indians.

With the FY 1971-1973 special appropriations for this purpose, and with every possible commitment of the Institution's regular budget, we have made a strong beginning on the program itself following an overall Bicentennial plan (see budget supplement). The work must be spread out over the next several years, allowing lead time for the research, design, collecting, and construction which go into the production of major exhibitions, and for the nationwide information-gathering that must take place. Phased scheduling will assure completion of the various program components by the Bicentennial year.

Closely related to this effort is the work and regular program plans of other history and art activities. The Hirshhorn Museum and Sculpture Garden will be completed in about June 1973 and after essential outfitting, with funds provided in the FY 1973 budget, and installing of exhibits it will be open to the public in 1974. Additional staff will be required to open and operate this new museum. At a time of rapidly changing technology and national and international tensions, there is an urgent need to preserve and appreciate man's special cultural traditions and achievements.

Improve man's understanding of the physical and natural environment upon which human society depends

Smithsonian research laboratories and offices conduct individual and coordinated environmental studies, including the analysis of biological and physical data on specific important ecosystems, hopefully to help predict the consequences of environmental change, and, thereby, contribute to better management of our natural world. The Institution has unique capabilities for such studies. These include highly competent personnel; the largest collections of plants and animals in the world (with detailed distribution, abundance, and other associated data); long-term experience with measuring the characteristics of solar radiation reaching the earth and other astrophysical data; and the availability of permanent and protected field-research sites in both temperate and tropical zones. In addition, the Smithsonian enjoys particularly favorable relations with its scientific colleagues and institutions in virtually every country of the world. Accomplishments and plans are cited throughout the program descriptions contained in this budget. Most of these have directly benefitted the research, university, and government communities. In addition, the "World of Living Things", initiated in FY 1972, is a major exhibition now under production in the National Museum of Natural History to serve as a popular introduction to ecology and the exposition of worldwide environmental balances and imbalances. Scheduled completion is spring 1973.

In FY 1974 the Institution hopes to continue the phased development of its Tropical Research Institute, to develop the Earthwatch Program, and to give special attention to the important research and education efforts now emerging at its Chesapeake Bay Center for Environmental Studies.

Establish a great national museum on the Mall to recreate the experience of man's great adventure: flight and space exploration

Design of the National Air and Space Museum received final approval in early September 1972 and with the \$40 million contract authority obtained in the FY 1973 budget, construction contract awards will be made in early fall. A July 4, 1976, opening date is committed.

This building, in addition to being a showcase for historic machines, will also encompass a wide variety of educational exhibits concerned with the new science and technology of the Space age. The public will be able to see gathered together under one roof, for the first time, an explanation of how man has used a broad range of disciplines to achieve flight, and how he may extrapolate these into the future. The impact of flight upon our environment and our culture will be investigated and exhibited to the public using the latest multi-media techniques.

The slight increase in operating funds obtained by the National Air and Space Museum in FY 1973 will allow the first steps of operational development to begin. A drastically stepped up level of research, collections preparation, and exhibits planning and production that must take place while the building is under construction is essential. The FY 1974 budget request for this Museum and for the companion efforts of the Office of Exhibits have our highest priority.

Respond to the needs of the Nation's museums to assist them present to their public an appreciation of the past and portents of the future

Public Law 91-629 approved December 31, 1970, reauthorized appropriations for the National Museum Act through FY 1974 and funding of \$1,000,000 to the Smithsonian Institution each year. Of this amount about \$800,000 was provided by the Congress for FY 1973. Funding at the full \$1,000,000 as requested in the FY 1974 budget will permit the Smithsonian Institution to support fully all aspects of the National Museum Act.

The requested total funding would be used to meet the following basic needs of the nation's museums: cataloging and data access; museum laboratory centers, especially for conservation of the Nation's treasures; training of museum personnel; research in museum techniques; and the preparation of manuals of instruction.

Important and related aspects of our outreach activities are the nation-wide program of the Smithsonian Traveling Exhibits Service and the planned new exhibits training and production laboratory of the Anacostia Neighborhood Museum.

Improve the management of scientific and scholarly information

In our role as custodian of the Nations' collections and as a principal producer of basic research we must try to serve the public interest in improved management of scientific and scholarly information. Closely related to this effort must be the conservation and preservation of the sources of this information. The FY 1973 appropriation provided some slight additional support for this need. We must do better. The FY 1974 budget request contains major support for the installation of a collections

management system in the National Museum of History and Technology, the Conservation Analytical Laboratory, archives, libraries, and photographic documentation and preservation.

In order to obtain these objectives the Institution must also develop an adequate level of administrative and other supporting services including the maintenance, operation, and protection of buildings and facilities. The FY 1974 budget presents growth requirements for the administrative and support units which is in balance with the development of the Smithsonian's program responsibilities.

The budget estimates to help accomplish the Smithsonian's goals and objectives are presented in four sections:

A. "Salaries and Expenses"

<u>1972 Actual</u>	<u>1973 Appropriation</u>	<u>1974 Estimate</u>
\$44,701,000	\$51,633,000	\$66,353,000

The total increase, including program funds of \$13,775,000 and necessary pay funds of \$945,000, is for the regular operating programs in the museums, galleries, zoological park, research laboratories, and other program units; for special programs of an Institution-wide nature and of unusual importance for national research, education, exhibition, and museum assistance needs; for documentation and conservation; and for program support purposes. This is allocated by program as follows (organizational allocation appears on pages A-2 through A-3).

	<u>FY 1973</u>		<u>FY 1974</u>
	<u>Base</u>	<u>Increase</u>	<u>Estimate</u>
Science	\$18,162,000	\$ 5,226,000	\$23,388,000
History and Art	7,250,000	2,196,000	9,446,000
Public Service	2,082,000	502,000	2,584,000 +5
Museum Programs	5,369,000	1,797,000	7,166,000 - 5
Special Programs	2,955,000	1,946,000	4,901,000
Administration and Support	3,654,000	767,000	4,421,000 + + 2 - 1
Buildings Management	12,161,000	2,286,000	14,447,000 - 4 2 - 1
Totals	\$51,633,000	\$14,720,000	\$66,353,000

B. Science Information Exchange

<u>1972 Appropriation</u>	<u>1973 Appropriation</u>	<u>1974 Estimate</u>
\$1,600,000	\$1,600,000	\$1,900,000

A funding increase of \$300,000 is requested to meet the essential costs of maintaining and developing data input on research in progress as a national information service to the federal and nonfederal research communities.

C. Special Foreign Currency Program

<u>1972 Appropriation</u>	<u>1973 Appropriation</u>	<u>1974 Estimate</u>
\$3,500,000	\$3,500,000	\$9,000,000

The need is to provide adequate support, without a drain on hard dollars, for overseas archeological work, systematic and environmental biology, astrophysical and earth sciences studies, and museum programs. The development and expansion of regular programs, as well as the opening up of important new research possibilities, especially in India, Poland, Pakistan, Burma, and Yugoslavia have resulted in a rising demand for excess foreign currency funds by American Institutions of higher learning. The FY 1974 request also urges funding to complete with one final payment of \$4,000,000 equivalent in "excess" Egyptian pounds the United States contribution to UNESCO's international campaign to preserve the archeological monuments in Nubia.

D. Renovation, Restoration, and Construction

<u>1972 Appropriation</u>	<u>1973 Appropriation</u>	<u>1974 Estimate</u>
\$6,347,000	\$45,689,000	\$11,955,000 <u>1/</u>

Included in the FY 1974 budget are \$4,800,000 for the National Zoological Park. This will permit construction of the major new lion and tiger exhibit and other smaller new construction; design of the Connecticut Avenue entrance, administrative, education, and restaurant facility and design of the parking facilities and small projects; and repairs. An amount of \$7,155,000 is requested for major and minor restoration and renovation projects to other Smithsonian buildings and facilities including \$4,000,000 to construct a sixth floor library addition to the National Museum of History and Technology.

Details on each of these operating and construction programs appear in the following sections of this budget.

1/ Excludes a requirement for \$27,000,000 for liquidation of the contract authority provided in the FY 1973 appropriation.

Tab A

"SALARIES AND EXPENSES"

SMITHSONIAN INSTITUTION

Salaries and Expenses

Summary of the 1972 and 1973 Appropriations and the 1974 Estimates

	Page	FY 1972			FY 1973			FY 1974		
		Pos.	MY	Amount	Pos.	MY	Amount	Pos.	MY	Amount
Assistant Secretary for Science	6	9	9	\$ 170	9	9	\$ 123	9	9	\$ 127
National Museum of Natural History	7	335	305	5,676	358	328	6,442	418	388	7,933
Smithsonian Astrophysical Observatory	14	57	57	2,653	57	57	2,999	68	68	3,700
Smithsonian Tropical Research Institute	20	52	50	843	58	52	906	67	67	1,349
Radiation Biology Laboratory	22	46	40	1,105	48	46	1,354	50	48	1,546
Office of Environmental Sciences	24	32	31	682	33	35	719	35	36	770
Chesapeake Bay Center for Environmental Studies	26	10	10	160	10	10	140	19	19	373
National Air and Space Museum	28	44	42	754	56	56	1,070	91	91	2,192
Center for the Study of Man	31	10	8	202	12	10	243	15	13	328
National Zoological Park	32	286	249	3,827	286	272	4,166	322	308	4,970
Fort Pierce	36	-	-	-	-	-	-	3	3	100
Subtotal, Science		881	801	\$16,072	927	875	\$18,162	1,097	1,050	\$23,388
Assistant Secretary for History and Art	37	9	9	\$ 221	9	9	\$ 184	10	10	\$ 209
National Museum for History and Technology	39	155	137	2,457	161	150	2,835	171	160	3,787
National Collection of Fine Arts	42	72	59	1,221	75	70	1,396	80	75	1,810
National Portrait Gallery	44	39	40	924	43	48	1,052	47	52	1,418
Hirshhorn Museum and Sculpture Garden	48	21	21	623	23	23	1,166	42	42	1,400
Freer Gallery of Art	51	8	4	78	14	13	186	16	15	292
Archives of American Art	53	11	9	193	11	10	190	13	12	243
National Armed Forces Museum Advisory Board	55	6	6	131	6	6	134	6	6	136
Smithsonian Archives	56	6	5	81	7	7	107	10	10	151
Subtotal, History and Art		327	290	\$ 5,929	349	336	\$ 7,250	395	382	\$ 9,446
Assistant Secretary for Public Service	57	6	6	\$ 147	6	5	\$ 106	10	10	\$ 183
Anacostia Neighborhood Museum	60	15	10	206	18	13	267	23	18	327
Office of International Activities	62	9	9	140	9	9	155	11	11	201
International Exchange Service	64	9	9	147	9	9	160	10	10	185
Division of Performing Arts	65	7	7	265	9	9	303	12	12	416
Office of Public Affairs	67	12	13	372	12	16	281	15	18	337
Smithsonian Institution Press	68	25	24	816	25	24	810	27	26	935
Subtotal, Public Service		83	78	\$ 2,093	88	85	\$ 2,082	108	105	\$ 2,584
Assistant Secretary for Museum Programs	70	9	4	\$ 250	9	8	\$ 319	10	9	\$ 347
Conservation Analytical Laboratory	71	13	11	195	14	13	269	24	23	465
Office of Exhibits Programs	72	158	140	2,580	158	138	2,552	183	163	3,517
Office of the Registrar	74	31	27	323	32	31	373	32	31	379
Smithsonian Institution Libraries	75	59	48	864	63	61	1,058	80	78	1,343
Smithsonian Traveling Exhibition Service	77	-	-	-	-	-	-	7	7	115
National Museum Act	81	3	3	600	3	3	798	3	3	1,000
Subtotal, Museum Programs		273	233	\$ 4,812	279	254	\$ 5,369	339	314	\$ 7,166



Page	FY 1972			FY 1973			FY 1974		
	Pos.	MY	Amount	Pos.	MY	Amount	Pos.	MY	Amount
American Revolution Bicentennial Program	83	2	\$ 356	2	2	\$ 754	2	2	\$ 1,987
Environmental Sciences Program	85	8	268	8	10	273	8	10	-425 ³⁷⁵
Major Exhibition Program	87	-	525	-	-	749	-	-	950
Academic and Educational Programs	88	22	15	23	19	729	29	25	989
Research Awards	91	-	425	-	-	450	-	-	550
Subtotal, Special Programs	32	25	\$ 2,227	33	31	\$ 2,955	39	37	\$ 4,901 ⁴⁸⁵
Administrative and Support Activities									
Office of the Secretary	93	22	\$ 391	24	24	\$ 425	28	28	\$ 520
Office of General Counsel	94	9	213	10	10	192	12	12	250
Office of the Treasurer	95	33	647	35	33	754	38	36	831
Office of Personnel	97	32	471	35	32	534	40	37	639
Office of Audits	98	5	116	6	6	107	8	8	139
Office of Equal Employment Opportunity	99	3	64	3	3	63	6	6	121
Photo Services Division	100	26	368	29	27	520	36	34	600
Information Systems Division	102	14	267	17	17	322	22	22	421
Supply Division	105	21	365	21	21	404	24	24	463
Management Analysis Office	106	10	168	10	11	186	14	15	242
Other	107	10	165	10	10	147	12	12	195
Subtotal, Administrative and Support Activities	185	174	\$ 3,235	200	194	\$ 3,654	240	234	\$ 4,421
Buildings Management	109	789	\$10,442	851	797	\$12,161	1,098	1,044 ⁶	\$14,447
TOTAL	2,570	2,332	\$44,810	2,727	2,572	\$51,633	3,316	3,168 ⁸	\$66,353 ⁶⁶³⁸⁸

SMITHSONIAN INSTITUTION
NECESSARY PAY AND RELATED BENEFITS

An increase of \$945,000 is required for personnel compensation and personnel benefits for the projected higher costs in FY 1974 of FY 1973 staff. The operations of the Smithsonian have been carefully reviewed and the following costs cannot be absorbed by funds already in the base.

a. To finance periodic step increases made in accordance with the Government Employees Salary Reform Act of 1964 and with currently prevailing practices in the wage scale...	\$755,000
b. To finance wage raises for the manual employees in Panama and the wage grade, wage leader, and wage supervisor employees in the rest of the Smithsonian Institution.....	240,000
c. Offset by savings due to reducing average general schedule grade level	-50,000
	<u>\$945,000</u>

Periodic step increases are made in accordance with Government Employees Salary Reform Act of 1964 and prevailing practices in the wage system. The apparent cost was determined through a position-by-position study and has been offset by the effect of employees leaving the Smithsonian and not receiving their within grades and by employing new personnel at lower steps than previous incumbents. This salary increase would average approximately \$272 for within grades of employees in their present positions. In the past the amount was also offset by the effects of promotions of employees in their present positions. Again, this has not been done this year because of the current controls on promotions in order to reduce the average grade.

The Smithsonian Institution employs over 700 wage employees. These employees receive a wage raise in the fall of each year. In FY 1973 the wage board employees are expected to benefit from three pay actions.

On August 20, 1972 the non-supervisory wage grade employees in grade 1 thru 4 benefited from a salary increase. The increase ranged from one cent per hour to nine cents per hour for employees in this range.

The number of steps in the wage grade series was three for non-supervisory and leader personnel. The steps will be extended to five for non-supervisory and leader personnel on or before April 20, 1972. Since the time in grade from step 1 through 3 was only 18 months most of our wage personnel are already in step 3. The waiting period to go to step four is understood to be two years. Therefore approximately 60 percent of the wage employees in the non-supervisory and leader scales will go to step 4.

A new wage review has been ordered for the entire wage structure, non-supervisory, leader and supervisor personnel. This raise is to be made effective October 29, 1972. Because of the Administration's Wage and Price Controls this raise is expected to be limited to 5.5 percent. The request for \$240,000 is to finance the annual cost in FY 1974 of the raise effective August 20, 1972, the extension of the steps, and the annual cost of the raise expected in October 1972.

In addition, the manual employees at the Smithsonian Tropical Research Institute in Panama received a raise in July 1972 and are expected to receive another raise in July 1973.

<u>Unit</u>	<u>Periodic Step Inc.</u>	<u>Wage Raises</u>	<u>Total</u>
Assistant Secretary-Science	\$ 4		\$ 4
Nat. Museum of Natural History	175		175
Smithsonian Astrophysical Observatory	11		11
Smithsonian Tropical Research Inst.	16	2	18
Radiation Biology Laboratory	11	13	24
Office of Environmental Sciences	13	3	16
Chesapeake Bay Center for Env. Studies	3		3
National Air and Space Museum	19	2	21
Center for the Study of Man	5		5
National Zoological Park	54	60	114
Assistant Secretary-History and Art	4		4
Nat. Museum of History and Technology	70		70
National Collection of Fine Arts	28		28
National Portrait Gallery	20		20
Hirshhorn Museum and Sculpture Garden	4		4
Freer Gallery of Art	5	1	6
Archives of American Art	3		3
National Armed Forces Mus. Advisory Bd.	2		2
Smithsonian Archives	1		1
Assistant Secretary-Public Service	3		3
Anacostia Neighborhood Museum	5		5
Office of International Activities	6		6
International Exchange Service	5	5	10
Division of Performing Arts	4		4
Office of Public Affairs	4		4
Smithsonian Institution Press	5		5
Assistant Secretary-Museum Programs	3		3
Conservation Analytical Lab	3		3
Office of Exhibits Programs	50	15	65
Office of the Registrar	6		6
Smithsonian Institution Libraries	11		11
National Museum Act	2		2
Environmental Sciences Program	2		2
Academic and Educational Programs	9		9
Office of the Secretary	7		7
General Counsel	6		6
Treasurer	12		12
Office of Personnel	5		5
Office of Audits	2		2
Equal Employment Opportunity Office	1		1
Photographic Services Division	7		7
Information Systems Division	9		9
Supply Division	7		7
Management Analysis Office	7		7
Other	1	14	15
Buildings Management Department	<u>75</u>	<u>125</u>	<u>200</u>
 TOTAL	 \$705	 \$240	 \$945

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration of Science Programs <u>1</u> /	9	\$170,000	9	\$123,000	9	\$127,000

1/ Advises and assists the Secretary in planning, implementing and reviewing the progress of Smithsonian science programs.

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

1972 Actual.....\$170,000
1973 Estimate.....\$123,000
1974 Estimate.....\$127,000

The Office of the Assistant Secretary for Science advises and assists the Secretary in planning, implementing and reviewing the progress of Smithsonian science programs. This office assists in planning, coordinating, and reviewing the work of the various scientific bureaus and offices within the Smithsonian. The bureaus reporting to the Assistant Secretary for Science are the National Museum of Natural History, the Radiation Biology Laboratory, the Smithsonian Tropical Research Institute, the National Zoological Park, the National Air and Space Museum, the Smithsonian Astrophysical Observatory, the Office of Environmental Sciences, the Chesapeake Bay Center for Environmental Studies, the Center for the Study of Man, the Smithsonian Science Information Exchange, and Fort Pierce. This office is also responsible for the administration of the Research Awards Program and the Environmental Sciences Program.

No program increase is being sought for this office. An amount of \$4,000 is sought for necessary pay.

NATIONAL MUSEUM OF NATURAL HISTORY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Develop & disseminate basic environmental data <u>1/</u>	167	\$3,230,000	176	\$3,584,000	202	\$4,319,000
Resources of the earth <u>2/</u>	69	1,308,000	74	1,529,000	87	1,905,000
Man in nature <u>3/</u>	24	491,000	26	538,000	29	638,000
EDP applications <u>4/</u>	28	323,000	33	424,000	49	648,000
Public science education <u>5/</u>	<u>17</u>	<u>324,000</u>	<u>19</u>	<u>367,000</u>	<u>21</u>	<u>423,000</u>
Total operations	305	\$5,676,000	328	\$6,442,000	388	\$7,933,000

1/ This activity is continuing curation, restoration, preservation, and protection of the National Collections. Included is basic research with the collections to explain the ecological relationships of organisms and their inter-action with their environments, past and present, to provide data to scientists in their search for the solution to current problems and the prevention of further deterioration of the environment.

2/ Systematic field and laboratory research dealing with the evolution of plants, animals, and minerals; the social organization of organisms; the study of the earth's structure and extraterrestrial bodies; and other research designed to provide basic information to researchers in many institutions who are seeking to more fully understand, manage, and husband natural resources.

3/ Fundamentally, man's culture is the result of his efforts to adapt to his environment through time. These studies of past changes in climate, the environment, and associated flora and fauna provide basic data which are essential to current ecological studies of man's modification of his environment and for the prediction of the future impact of man on his environment.

4/ Major application of automated techniques extracting research information about the collections began in FY 1971. Fiscal Year 1972 saw the program grow significantly. In FY 1973 the program is being expanded to cover mineral collections and collections of invertebrate marine organisms. FY 1973 funds are also being used to support the creation of a major catalog on North American insects, the storage of data about diseases in ancient man as reflected in bone structure, and in support of timesharing and research data banking on behalf of the scientific staff. Some of the funds requested for FY 1974 will be used to broaden efforts already underway in six departments. New initiatives will be undertaken in three departments.

5/ Educational activities for the general public, primary and secondary school children, and pre- and postdoctoral students. Activities also include a large volume of correspondence, tours, exhibits and seminars. The Insect Zoo, initiated in FY 1972, was expanded in FY 1973 and continued to be one of the most exciting exhibits in the Museum. A visitors' lounge is being converted to a discovery room where children will be able to touch shells, fossils, and other natural objects to enhance their museum experience. In conjunction with the discovery room, a junior science library is being installed to supplement the impact of learning by touch and sight.

NATIONAL MUSEUM OF NATURAL HISTORY

1972 Actual.....	\$5,676,000
1973 Estimate.....	\$6,442,000
1974 Estimate.....	\$7,933,000

This Museum serves as a national and international center for the natural sciences. It maintains the largest reference collections in the Nation and conducts a broad program of basic research on man, plants, animals, fossil organisms, rocks, minerals, and materials from outer space. Its research is concerned with classification, distribution, analysis, and environmental and ecological relationships. Its fundamental studies in systematics and biology are providing new information required for the solution of major national problems of conservation and pollution, food production, improvement of medical knowledge, and for planning national and international programs leading to predictive ecology and environmental management. It engages in joint educational programs with universities by teaching courses, training graduate students, conducting science seminars, and providing leadership in the improvement of museum techniques, collections management, especially through the application of computer technology.

The National Museum of Natural History (NMNH) has the legal responsibility (20 U.S.C. 59) to serve as the ultimate Federal repository of all collections and objects of natural history, archeology, and ethnology made by agencies of the Government when no longer needed for investigations in progress. Additionally, the NMNH has become the repository for numerous extremely valuable collections obtained from other sources, such as the scientific community, academic institutions, as well as many private individuals. Because the Museum is the national repository, it has responsibilities far beyond the research of its own staff. It assists both the layman and the scientist with identification, lends specimens for research, and safeguards the tangible results of research. As the National Museum, it has inherent responsibility to provide leadership for other museums and institutions. In the latter role through use of its collections, NMNH is a vigorous interdisciplinary, scientific organization devoting an increasing share of its resources of professional staff and unrivaled collections to research which is fundamental to understanding, explaining, and coping with the multitude of environmental problems which beset humanity.

The National Museum of Natural History has in its collections approximately one-third of all the natural history specimens in the United States. There is no other single repository anywhere with so much documentary material for determining the composition of the biota in various parts of the world from millions of years ago to the present. For these reasons, the controlled acquisition, protection, and increased availability of the National Collections continues to occupy a high priority.

For FY 1974, the Museum is requesting an additional \$1,316,000 to further correct imbalances that exist between the levels of professional staff and the support effort necessary for proper curation of the collections; to strengthen the Museum's ability to respond to national problems by expanding and intensifying its research efforts which are directly associated with its collections in ecological and biological areas and resources of the earth; to continue the programmed expansion of the Museum's capability to extract and automate information on the collections (with this increase the Museum's EDP efforts would reach a level which would permit the most effective use of project personnel and efficient operation without an increase in the planning and supervisory personnel); to begin a program of employing

temporary "para-scientists" to curate collections which have had little or no attention for extended periods; additional administrative support to adequately handle the increased workload of the Museum and funds to cover the costs of printing Museum guides for use by the millions of visitors who see the exhibits annually. An increase of \$175,000 is needed to cover necessary pay increases.

Museum Support Deficiencies (27 positions; \$551,000)

The increased funding provided to the Museum in FY 1972 and 1973 has enabled it to make substantial progress in the program to correct the curatorial and research support shortages relating to the Museum's operation which were initially identified in the FY 1972 budget presentation. This program is an essential part of the total efforts to make the Museum and its collections more useful to those institutions and agencies needing expertise in their basic research.

With funds provided in the FY 1973 appropriations the NMNH will be able to achieve a support staff/scientist ratio of 1.55 to 1.00. This is a major improvement over the completely inadequate and wasteful 1.1 to 1.0 relationship which existed in 1971. Already we are seeing the benefits which come from the resulting increase in effectiveness in the productivity of both the scientific and higher level technical personnel. The improvement anticipated for FY 1973 will still fall well short of the goal of 3 support personnel (technical and clerical) for each professional employee recommended in 1969 by the President's Science Advisory Committee and the Panel on Systematics and Taxonomy. The increase requested for FY 1974 will enable the Museum to more nearly obtain the support ratio of 2 technical and clerical personnel for each scientist originally intended to be achieved in FY 1973. The need for further substantial improvement of this ratio is quite evident. Nevertheless, experience at the 2 to 1 support level will be evaluated before requesting any additional funds to move further toward the establishment of the recommended 3 to 1 relationship.

Of the proposed \$551,000 increase, \$219,000 is associated with technical and clerical personnel positions being requested, \$301,000 is sought to continue to improve current levels of funding for travel, supplies, materials, and equipment purchase, replacement, and maintenance.

Included in the \$301,000 support request is approximately \$150,000 for equipment items, which along with current base funding allowed in FY 1972 would place the museum's ability to acquire and replace needed museum and scientific equipment annually at a funding level of about \$333,000. A large part of these purchases is related to special scientific instrumentation needs. Such equipment is frequently complex and costly, but is essential to acquire if the research scientists are to keep abreast of the developing techniques of their specialties. The goal through FY 1975 is to increase the scientific purchase and replacement fund to an annual level of approximately \$500,000. Again, operating experience at this level would be evaluated and a report compiled indicating what might be a desirable and optimum fund level.

The balance of the increase is directed at allowing a small enlargement of the administration staff (2 positions, \$15,000 for personnel costs) to keep pace with the pressures resulting from the recent program growth, and to continue to improve the drastically low levels of support which were available per scientist for field trips, normal supplies and materials and other centrally provided services (\$167,000). As proposed earlier, some amount of this increase will be earmarked, if possible, to curate special portions of the collections utilizing non-permanent term appointments.

Table I

NATIONAL MUSEUM OF NATURAL HISTORY

*Ratios of Man-Years of Effort Between Technicians/Scientists

Department	FY 1972			FY 1973a/			FY 1974b/		
	Support	Scientist	Ratio	Support	Scientist	Ratio	Support	Scientist	Ratio
Anthropology	26	16	1.63:1.0	28	18	1.56:1.0	32	18	1.78:1.0
Botany	22	18	1.22:1.0	27	18	1.50:1.0	34	18	1.89:1.0
Entomology	18	12	1.50:1.0	19	12	1.58:1.0	23	12	1.92:1.0
Invertebrate Zoology	25	18	1.39:1.0	27	18	1.50:1.0	34	18	1.89:1.0
Mineral Sciences	13	11	1.18:1.0	15	11	1.36:1.0	20	11	1.82:1.0
Paleobiology	27	19	1.42:1.0	29	19	1.53:1.0	35	19	1.84:1.0
Vertebrate Zoology	<u>23</u>	<u>14</u>	<u>1.64:1.0</u>	<u>25</u>	<u>14</u>	<u>1.79:1.0</u>	<u>27</u>	<u>14</u>	<u>1.93:1.0</u>
TOTALS	154	108	1.43:1.0	170	110	1.55:1.0	205	110	1.86:1.0

* Ratios apply to personnel assigned directly to science support. They exclude EDP applications and NMNH director's office.

a/ FY 1973 relationships assume planned employment of personnel within allowed OMB employment ceilings.

b/ FY 1974 reflects relationships which would obtain with full implementation of FY 1972 OMB allowances and full employment of personnel requested in the FY 1974 increases.

Develop and Disseminate Basic Environmental Data (4 positions and \$195,000)

In FY 1974, funds are being sought in three areas: physical anthropology; pollination biology; and coral reef ecosystems.

a. Paleopathology in Physical Anthropology (1 position; and \$10,000 personnel costs; \$40,000 support funds)

Human skeletal populations provide a time-depth-perspective in the study of a wide range of biological problems affecting modern man. With the rapidly expanding research on skeletal collections it is apparent that larger samples with much more careful archeological documentation are needed to solve the problems being exposed by current research. To meet this growing need, a major increase in the data resources of the physical anthropology collections is needed. Such an increase should focus on obtaining new skeletal collections from carefully excavated archeological sites and developing a registry of known disease processes which affect both teeth and the shape of gross bone. Some of these pathological evidences include syphilis, arthritis, anemia, osteomyelitis, cancer, rickets, scurvy, and caries. Potential archeological sites having both large numbers of burials and an adequate time depth need to be excavated. At the same time these collections are being made, a registry should be started of known bone disease processes consisting of gross and microscopic specimens, x-rays and photographs. The development of a registry will provide the necessary data interpreting paleopathological conditions of past populations as well as provide comparative data on the relationship between contemporary and prehistoric dental and bone diseases.

b. Pollination Biology (1 position and \$12,000 personnel costs; \$43,000 support funds)

The present limited program on behavior, intrafloral relationships, and systematics of pollinating insects has resulted in the discovery of the very important and unique role played by certain solitary North and South American bees in the pollination of the squashes and gourds native to the Americas. As a result of the current studies, plans are being made for the importation and liberation of certain of the American bees into Hawaii and developing countries where the American squashes and gourds are already being cultivated. It is anticipated that this will result in substantially increased crop yields in Hawaii and other countries where bees native to those areas are not effective pollinators. The expansion of studies of pollination systems entails a detailed analysis of reproductive breeding systems of plants and their pollinators with an overall goal of achieving an understanding of how insect pollinated plants have evolved and are maintained in the various ecosystems of the world. Special attention will also be directed to the study of other selected cultivated plants requiring insect pollination.

c. Coral Reef Ecosystems (2 positions and \$24,000 personnel costs; \$66,000 support funds)

Man's role in the destruction of natural environments and ecological systems is becoming increasingly evident. Although national scientific effort is being applied to the problem, most studies are in terrestrial areas. It is necessary to study short and long-term changes in a marine ecosystem. Coral reefs constitute one of the most complex habitats in the marine tropics. They are dominant features in shallow water, and in many areas represent a vital source of food and livelihood to people living nearby.

Our knowledge of the basic biology and evolution of coral reefs is fragmentary. An intensive study is proposed of the biology and history of corals and reefs. Ecology, systematics, and evolution of the living and extinct corals will be investigated in the Caribbean and central to western Pacific Ocean.

Resources of the Earth (6 positions and \$255,000)

Funds are being requested for projects in three areas: a study of vegetation of Dominica; systematic research regarding ore deposits; and, a major computerized effort to produce a much needed inventory of the flora of North America.

a. The Vegetation of Dominica (1 position and \$10,000 personnel costs; \$15,000 support funds)

A floristic study of the vegetation of Dominica, a tropical forested island in the West Indies, has been underway as an official Smithsonian project since 1964. The goal is the completion of a separate publication on the dicotyledonous plants for which there is no previous coverage for this island. The project is urgent in face of new, major logging operations which are rapidly changing the ecosystem of the island. Given the support envisioned here, the project could be completed within two to three years.

b. Systematic Research on Ore Deposits (1 position and \$12,000 personnel costs; \$18,000 support funds)

Government agencies, academic institutions, the mining and other private industry long have looked to the National Museum of Natural History to provide basic information on ores and ore deposits. Their activities frequently require basic data on the textures and mineralogy of the nation's deposit suites. But once a mine is abandoned it usually collapses or is sealed. The mineral suites it contains are then no longer available. Because of this, representative suites from many formerly important mines are not now available, even though they would have both research and economic value. The objective of this project is the preparation and maintenance of a reference collection of national rock and mineral suites.

c. Flora of North America Program (4 positions and \$127,000 personnel costs; \$73,000 support funds)

The Museum is being called upon by the national and international scientific community to assume a larger responsibility for computer-based biological data banking. After three years of planning, supported by the National Science Foundation, Smithsonian scientists, in cooperation with botanists from many other North American scientific institutions, are ready to implement the Flora North America (FNA) Program. The National Science Foundation has agreed to cooperate with the Smithsonian in getting FNA started. In this program, botanists and related scientists are working with information science specialists in an effort to produce a computerized resource inventory of North American plant species. Basic descriptive and diagnostic data are being input to the system initially to be followed as soon as feasible with ecological and environmental data. The Museum has been asked by the botanists to maintain the central data bank. Teams of botanists will be working at the following institutions initially to prepare the data for

the system: Michigan State University, Missouri Botanical Garden, New York Botanical Garden, Plant Research Institute (Ottawa), Stanford University, University of British Columbia, and the University of North Carolina, Chapel Hill in addition to the Smithsonian. It is planned that a basic catalog (Flora) of about 20,000 North American plant species will be ready for publication directly from the system at the end of a six-year input effort. This will be the first Flora of North America in history, and will provide much needed standard reference information to botanists around the world.

Electronic Data Processing Applications (15 positions and \$116,000 personnel costs; \$84,000 support funds)

The Electronic data processing program is designed to assist in the fulfillment of the Museum's responsibility of caring for and disseminating information about the specimens in its care. The techniques of automation are utilized to create multiple indices to the specimen holdings thus making them more available to science. This represents the primary goal of the program, to encompass and more fully discharge the traditional responsibilities of the Museum using the techniques of modern data processing. The second major goal of the program is to constructively introduce automation, where appropriate, into the research environment. The power of the computer to cheaply and accurately integrate great quantities of information about large numbers of specimens is employed to stimulate new and deeper analysis of these specimens in order to learn more about their evolution, distribution, and community structure.

New efforts have been selected for inclusion in the program on the basis of the importance of the collections with which they will deal or because of the services which they will provide to particularly promising research projects. Important new collections which will be treated in FY 1974 include rocks, the anthropological archives, the collections of fossil mammals, echinoderms and bryozoa, marine birds and the fish type specimens collection. Additional efforts will be directed at increasing data curation in the department of anthropology, entomology, invertebrate zoology and vertebrate zoology.

Progress has been made in this program, and has been marked by the publication of two catalogs, and the establishment of more efficient and accurate methods for the recording of data about new accessions for nearly all of the most active zoological collections in the Museum. Assistance has been rendered to three other major United States Museums in establishing compatible methodologies as the first step in creating a National data storage and retrieval program for the natural sciences. The demand from many other institutions for the same kind of assistance is intense and will be met as best as possible within the limitations of the other work which must be done.

Short-term "Para-Scientists" (8 positions and \$115,000 personnel costs)

The expansion of the support staff as a result of the increased funding provided in FY 1972 is already paying dividends in many ways, some of which had not been fully anticipated. The employment of staff at the lower grades has permitted those at the specialist levels (primarily grades GS 11 and 12) to take on duties and responsibilities formerly discharged by members

of the scientific staff. While this is one of the objectives it had been hoped to achieve, the degree to which this has developed is beyond expectations. It is clear that persons qualified for these levels can discharge effectively duties which can best be described as "para scientific". However, it is also evident that it would not be practical to attempt to employ sufficient permanent staff to meet all the areas of need which have been identified. Therefore it is proposed to provide for 8 term appointments at the GS-11 level to curate and care for the collections; particularly those which none of the present professional staff is engaged in studying. These term appointments would range from one to three years and the occupants would be selected and assigned to one of the departments on the basis of need.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Earth as a planet	9	\$ 267,000	9	\$ 318,000	9	\$ 332,000
Solar system	17	971,000	17	1,098,000	17	1,140,000
Energetic phenomena	30	1,161,000	30	1,286,000	32	1,393,000
Technical support	1	254,000	1	297,000	10	480,000
Information acquisition and processing	—	—	—	—	—	355,000
Total operations	57	\$2,653,000	57	\$2,999,000	68	\$3,700,000

1972 Accomplishments

Initial phases of the development of the Multiple Mirror Telescope that will result in the construction of the world's third largest telescope at SAO's Mt. Hopkins Observatory. Discovery of acetaldehyde, a new chemical in space by radio telescope. Construction of an infrared telescope for balloon-borne, high-altitude celestial observations. Initiation of millimeter-wave observations in the little explored region of the electromagnetic spectrum between infrared and radio waves. Continuation of studies of man's environment through observations of the solid earth, earth motions, high atmosphere, and lower atmosphere particles and aerosols. SAO scientists received the following distinguished awards in recognition of their outstanding work: NASA Medal for Exceptional Scientific Achievement; Gold Medal of the American Association for the Advancement of Science and the Meteoritical Society; National Civil Service League Career Service Award for Sustained Excellence. SAO asked to chair Comet and Asteroid Science Working Group under the Planetology Division of NASA.

1973 Planned Accomplishments

Continuation of construction of the Multiple Mirror Telescope. Initiation of Infrared observations from high-altitude balloons. Continuation and improvement of millimeter wave observations in search of new molecules in space and in studies of pollutants in the earth's atmosphere.

1974 Forecasted Activity

Installation of high-efficiency silicon vidicon sensor equipment to enhance the power of the 60-inch Tillinghast reflector at Mt. Hopkins. Increase the capability of SAO's computer system to permit extension of, and interaction with, computer programs used in theoretical astrophysical studies. Continuation of infrared observations from high-altitude balloons. Extension of procedures used in calculations of molecular structure to dynamic problems in terrestrial and planetary atmospheres. Alleviation of some critical research and support shortages for increased efficiency in utilization of existing manpower and equipment.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

1972 Actual.....\$2,653,000
1973 Estimate.....\$2,999,000
1974 Estimate.....\$3,700,000

Since 1890, the Smithsonian Astrophysical Observatory (SAO) has pursued a broad program of research in astrophysics and, more recently, in related space sciences. SAO places particular emphasis on those programs that promise to achieve scientific leadership for the Observatory, or that establish standards or references for use by the scientific community. For example, during FY 1973, the Observatory will complete and publish a catalog giving the ultraviolet brightness of over five thousand stars observed by the Telescope instruments on Orbiting Astrophysical Observatory 2. During the same fiscal year, SAO plans to complete Smithsonian Standard Earth III, containing a uniquely significant set of global geodetic parameters, superseding the 1969 Smithsonian Standard Earth II.

The Observatory conducts basic research in three major program areas: the earth as a planet, the solar system, and energetic phenomena in the universe.

An appropriation increase of \$690,000 is requested for FY 1974 to cover the increased cost of rented space in Cambridge, Massachusetts, to apply advances in modern computer and electronic technology to SAO's astrophysical research, and to alleviate a critical shortage of technical support. In addition, \$11,000 are requested for necessary pay.

Rental of Office and Laboratory Space (\$90,000)

Observatory headquarters are in Cambridge, Massachusetts, where necessary office and laboratory space is rented from Harvard University. This provides for SAO's research scientists the stimulation of daily contact with graduate students and faculty colleagues at one of this country's finest university observatories. Between FY 1972 and FY 1974, the cost of renting those offices and laboratories used by SAO's research staff will increase by \$90,000.

Information Acquisition and Processing (\$355,000)

In April, 1972, the National Academy of Sciences published Astronomy and Astrophysics for the 1970's, the report of the astronomy survey committee that for more than a year had been reviewing the status of and defining national goals for this science. One of the four highest-priority recommendations made by this distinguished panel was, "An optical program that will vastly increase the efficiency of existing telescopes by use of modern electronic auxiliaries..."

Already experienced in construction and operation of one such auxiliary, the electronographic camera, SAO's observational scientists are now ready to begin installation and operation of what the survey committee called the ultimate system--a TV-like array of sensors that will make a telescope 25 times more effective than when used with photographic film. Installed at the 60-inch Tillinghast reflector on Mt. Hopkins, such a vidicon system at a cost of \$90,000 will make that telescope equivalent to one of 300-inch aperture. (For comparison, it is estimated that a 200-inch telescope would cost nearly \$25 million to build).

Another of the 11 high-priority recommendations of the astronomy survey committee called for "A sizeable increase of support for theoretical investigations including an expansion of capability for numerical computation; ...Theroetical astrophysics, whose tool is the large computer, is a relatively inexpensive subject that needs increased funds."

SAO now has on its staff what is probably the most powerful group in the world conducting theoretical research in stellar atmospheres. To realize the full potential of their research capability, SAO will increase its information processing to 1) obtain high-quality data and transmit it in reduced useable form to those scientists who need it (see fig. 1); and 2) provide an expanded central computation facility adequate to the tasks of associated theoretical analysis (see fig.2).

The modern electronic instrumentation already in operation at Mt. Hopkins and other SAO sites, as well as the proposed television data system, produces vast quantities of data. A small computer at a cost of \$20,000 linked with the collection system will reduce this mass of raw data in a timely and inexpensive manner to output ready for scientific analysis.

The on-site computer will also act as a terminal to the existing large computer in Cambridge, enabling observers at Mt. Hopkins to use this central processing unit. Thus, a scientist could use data collected from previous experiments as a means for developing further observing patterns, for reducing manpower, effort, and expense, and for making the most effective use of his instruments.

Researchers also need more effective interaction with their data and programs. As an example, computer programs that deal with heavily parameterized problems may require a number of runs, changing in only one or a few variables, in an attempt to find those values leading to a particular result. The interactive monitoring of such runs in progress allows temporary stops for immediate on-line adjustments, thus requiring less computer processing per run. New values can be inserted quickly and effortlessly, allowing the analysis to continue. This most effective use of both the scientists and the computer's time is possible through interactive conversational terminals interfacing to SAO and other research facilities' computer systems. SAO is implementing an interactive conversational system, will initiate pilot operation during FY 1973, and will need \$10,000 for further implementation in FY 1974.

Faster response time is required in a viable interactive system than in batch processing. A unit of extended core storage (ECS) costing \$135,000 would be added to the computer to act as a swapping device to satisfy this requirement. In addition, individual computer programs will be able to access the ECS directly for arrays, data tables, and matrix elements. This "direct" ECS programming technique provides an alternative to the use of central memory and allows reduction of large programs.

During the 4-year period FY 1970 through FY 1973, SAO scientists will have received no increase in computer time. Fortunately, the SAO Computer Center user's rate has remained stable over that period, and total costs have increased only 10.3%. The scientific need to compute extended stellar models and the orbits of comets, asteroids, and meteors--to mention a few of the myriad of calculations--has continued to grow. To maintain the scientific thrust outlined in Astronomy for the Seventies additional funds in the amount of \$100,000 for more computer time are absolutely necessary.

Technical Support (9 positions; \$183,000)

The alleviation of a critical shortage of technical support personnel is long overdue. The complexity of modern research problems and the methods for solving them demand larger and more highly trained support staff. In addition to the few secretaries and janitors of the 1950's, today's observatory needs engineers, specialists in data processing, laboratory technicians, and observers.

As a modern, dynamic observing facility has developed at Mt. Hopkins, Arizona, the need for these types of skilled, technically trained people has become critical. Table 1 shows the needs at the two major facilities at Mt. Hopkins. Not only will the Multiple Mirror Telescope be one of the largest and most complex astrophysical observing instruments ever built, but also it will be the prototype of larger and better instruments of similar configuration. Therefore operational demands placed upon it are expected to be particularly heavy. The first four personnel that will be needed to service and operate this multi-million dollar facility must be on the staff and trained prior to installation of the equipment. In this way they will be fully prepared to assume responsibility for its proper maintenance and use. At least two observers are required because the telescope will be in operation seven nights a week plus some daylight observing.

Table 1

Multiple Mirror Telescope	Electronic technician Mechanical technician Observers (2)
60-inch Telescope	Electromechanical technician Observer

The 60-inch telescope has been operating at less than optimum efficiency because of the lack of an observer. A scientist using the telescope must have with him a colleague or student assistant, which means added travel expenses and time lost in learning to operate the telescope. In addition, there should be an electromechanical technician on the Federal staff to ensure proper maintenance and operation of this major instrument.

To provide adequate support for the development of complex astrophysical observing systems such as the Multiple Mirror Telescope and the infrared balloon, a modern astrophysical observatory requires particularly skillful and versatile professional engineering. The management of large, multi-faceted development programs demand equally skillful program management. Therefore SAO plans to employ both a systems program manager and a senior engineer.

Despite the fact that the Observatory has a team of theoretical astrophysicists of international renown working in the mathematical modeling of stellar atmospheres, and despite the fact that the Astrophysical Observatory successfully operates one of the larger computational centers in the Northeast, SAO's federal scientists must do much of their own programming. This serious inefficiency must be alleviated by adding one senior programmer.

These particularly urgent needs for additional support personnel are a necessary step in bringing the Observatory's distribution of scientists vs. technical support people into balance. A gradual strengthening of the supporting staff in both Cambridge and Tucson, phased over several fiscal years, is contemplated.

Energetic Phenomena in the Universe (2 positions; \$62,000)

When the Multiple Mirror Telescope goes into operation, SAO must be prepared to make the maximum use of the facility. This will require the addition of a senior scientist experienced in optical observations who will be resident in the Tucson, Arizona Area. Not only will he be expected to conduct imaginative and productive research with the world's third largest telescope, but also his duties will include participation in selecting guest observers from among those qualified scientists who request telescope time. And perhaps most important of all, he must be able to guide the activities of in-house and visiting observers such that their telescope time produces the most significant results possible.

In addition, SAO is in a position to increase its research strength in infrared astronomy recommended by the National Academy of Sciences survey committee, which called for, "a significant increase in support and development of the new field of infrared astronomy..." as one of the four highest priority items. With modern technology opening new regions of the spectrum to astrophysical study, the Observatory can maintain broad capability in order to improve the physical picture of the universe and search for new physical processes relevant to man's welfare. One senior scientist is needed at this time.

THE MMT AND MT. HOPKINS OBSERVATORY

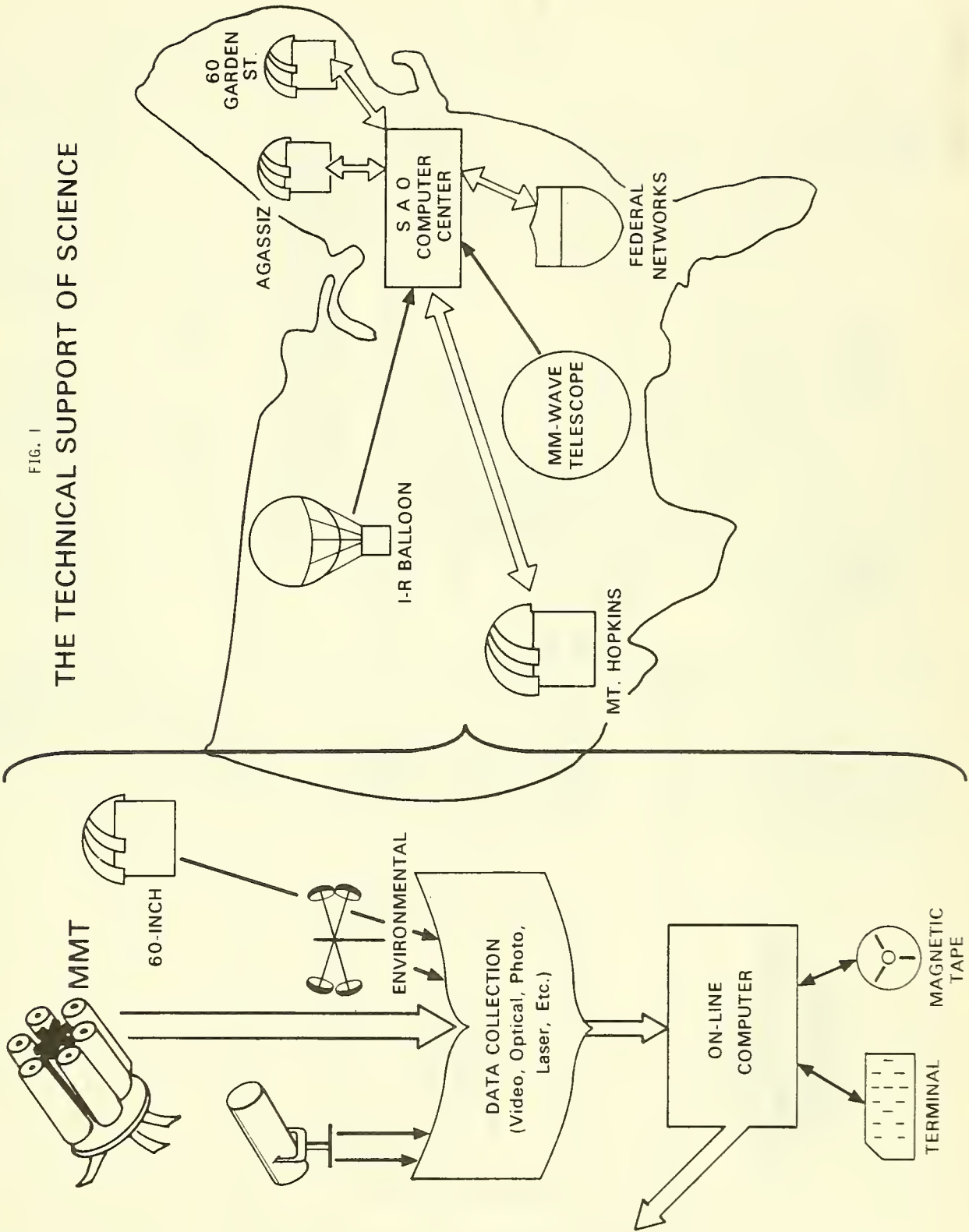
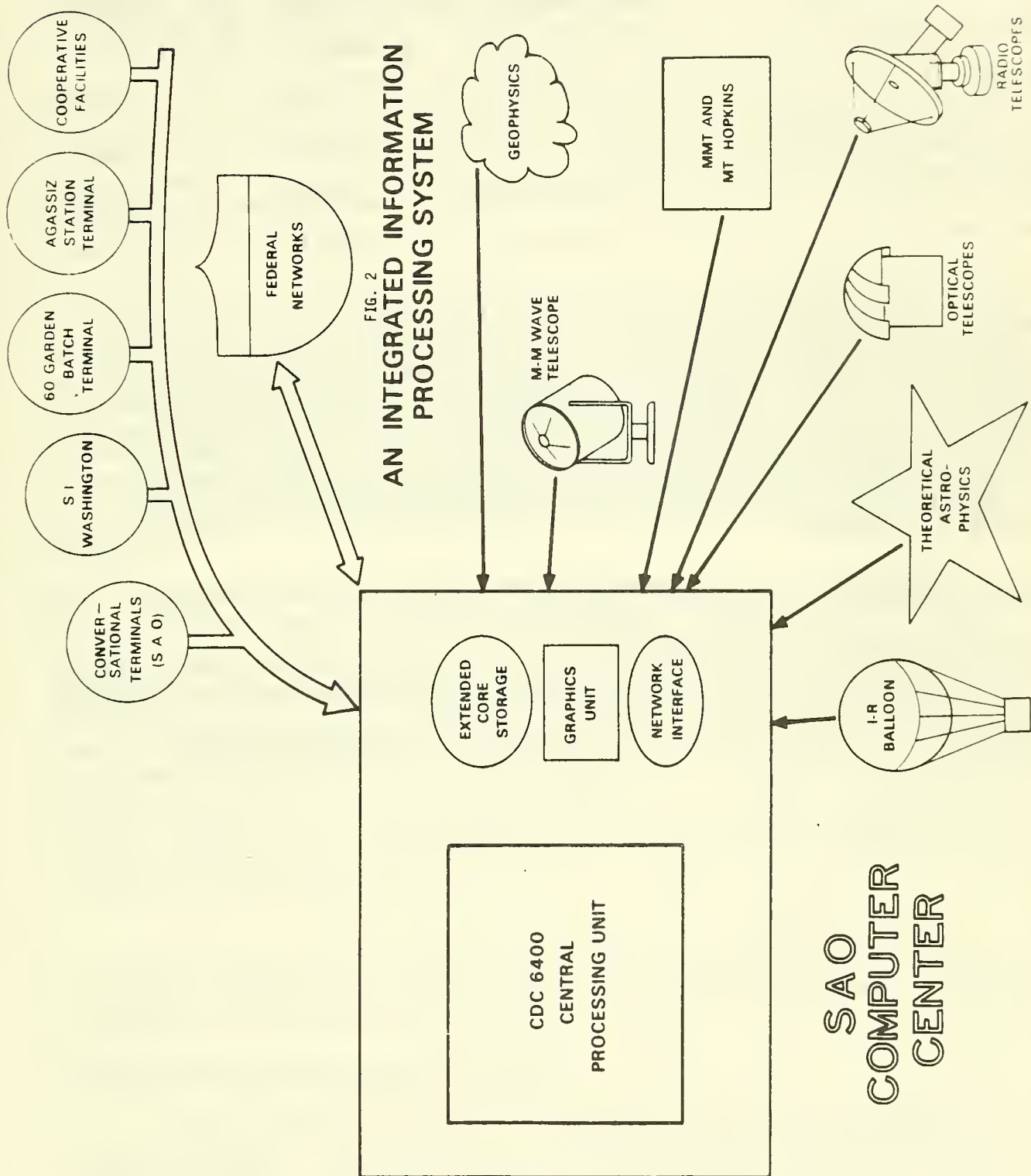


FIG. 1
THE TECHNICAL SUPPORT OF SCIENCE



SMITHSONIAN TROPICAL RESEARCH INSTITUTE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Direct research <u>1/</u>	17	\$390,000	18	\$435,000	26	\$715,000
Library <u>2/</u>	2	26,000	2	28,000	2	33,000
Facilities management <u>3/</u>	20	280,000	20	258,000	23	354,000
Administration <u>4/</u>	<u>11</u>	<u>147,000</u>	<u>12</u>	<u>185,000</u>	<u>16</u>	<u>247,000</u>
Total operations	50	\$843,000	52	\$906,000	67	\$1,349,000

1/ Includes studies on survival, importance of diversity, the critical role of communications, mapping and influence of environmental change, invasions by new populations and partitioning of environmental resources on land and in the oceans. The results of STRI research appear in the world's leading biological journals. In FY 1972 the eleven permanent biologists published 16 articles. Non-permanent staff members contributed 20 publications. Many others were written by visiting scientists based on work at STRI. Twenty-six seminars were given at STRI in FY 1972. In FY 1972, 797 men and women from 60 universities and 60 other institutions in 29 states and 38 countries visited the five STRI installations.

2/ Provides a small library to meet the needs of staff, visiting researchers, and the local university and scientific community.

3/ Includes maintenance of laboratories, living quarters, and maintenance shops at Balboa, Naos Island, Barro Colorado Island, Galeta Point, and Cali, Colombia.

4/ Includes administrative staff and other expenses for general program management.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

1972 Actual	.....	\$ 843,000
1973 Estimate	.....	\$ 906,000
1974 Estimate	.....	\$1,349,000

Established 26 years ago to foster understanding of the tropical environment as preserved on Barro Colorado Island, the Smithsonian Tropical Research Institute (STRI) has become a center of excellence for research studies by staff, advanced students, associates, and visiting scientists on the processes of survival and their relationship to the environment. These are essential questions for which the tropics are uniquely suited. In the tropics, diversities are greater, competitive processes and interactions more complex, new lines of adaptive radiation more pronounced, and year-round field study and experimental opportunities richer by far than in other climes. STRI provides an avenue for studying these interactions and for attaining a better understanding of the tropics--habitat for one-half of mankind.

Panama, easily accessible, offers an array of terrestrial and marine study habitats. The Isthmus is a land bridge for the biotic interchange of two continents and, at the same time, a continuing barrier to the biota of two oceans--separated by several millions of years, but only 50 miles apart. This affords an observational and experimental potential which cannot be matched elsewhere. The interdependence of ocean and continent is beginning to be publicly recognized. STRI has one of the few teams of scientists in the world capable of pursuing the biology of both realms. Work is under way on interactions between hundreds of different organisms and their environment in forests, lakes, seashores, and mountains--in almost forty different habitats. Concurrently, comparative studies elsewhere in the New and Old World tropics are magnifying efforts in Panama.

STRI was the first American biological laboratory in the tropics. It was joined by many others after the Second World War. Elaborate plans were stimulated for a series of programs and collaborative efforts. Some of these projects were brilliant. Some of them were successful in their time. But most of them have been closed or are in serious financial and/or political difficulty. There are many instances. What is surprising about these disappointments is that they have occurred during a period when the need for analyses of tropical environments has become increasingly apparent, and openly recognized by both official and unofficial agencies and institutions. The result of the recent changes is that STRI has become the national facility for biological research in the tropics. With continued interest in possible construction of a sea-level canal, the research of STRI into the basic structure of the Canal Zone environment is of continued great importance.

The FY 1974 budget contains a request for a program increase of \$425,000 to extend the research program, to maintain the library, to maintain and operate facilities, and to administer and support the program. An amount of \$18,000 is required for necessary pay.

Direct Research (8 positions; \$273,000)

So far, STRI has concentrated on the more theoretical aspects of the evolution, ecology, and behavior of the most accessible and fashionable non-human organisms. A great deal has been learned about monkeys, rodents, passerine birds, cuckoos, lizards, sea-snakes, frogs, littoral fishes, spiders, orthopteroid and hymenopteroid insects, echinoids and some other marine

invertebrates, orchids, and forest trees. Recently, STRI has begun to monitor a variety of population, phenological, and climatic changes, attempting to obtain quantitative assessments of the fluctuations which are critical. If and when we can say, definitely, that particular habitats and biotas are unstable or unpredictable in particular ways and to particular extents, then we may be able to determine the functional significance of many other distinctive features of the tropics, and to suggest possible advantages and disadvantages to particular environmental management policies.

Positions for four staff scientists and a technician are needed to extend research in these areas. Also needed are a number of temporary appointments to local students and to postdoctoral researchers from abroad to study specific problems. The individual specializations of new staff members are of vital interest but timing of selection cannot be predicted precisely. Needed are a fresh water fish ecologist, a more general limnologist, another mathematical ecologist, a statistician/computer programmer, a climatologist, a physical oceanographer, an ecological botanist, a student of soil organisms, and another entomologist. Support funds needed to continue existing research amount to \$8,000. Personnel and support funds needed for the above extension of research are \$185,000.

Some STRI scientists have been studying the signals of animals and plants for most of their scientific careers. The studies have been productive. Now it would appear that the Institute could mount a more intensive and sophisticated attack upon the problems of communication in general. For this, new and complex equipment, more space, and collaboration with specialists in linguistics and ancillary subjects. It would be desirable to add one of these specialists to the regular STRI staff. A position for a technician is also necessary and total funding of \$46,000.

Studies of human ecology and palaeoecology would be interesting in themselves. They should also provide historical perspective for other STRI work. If there is one point which has emerged from previous STRI investigations, it is that tropical habitats and environments of the present day are "artificial." They have been affected, even managed, by man for several thousands of years. We know that the impact of human activities must have been very great, but we really cannot say where or how or why. To get under way in this area, positions for a scientist and a technician and \$34,000 are required.

Library (\$5,000)

An increase of \$5,000 is needed to keep up with new scientific publications and to support new research programs.

Facilities Management (3 positions; \$89,000)

The acquisition of an existing building in Balboa for new laboratories, accomplished in FY 1973, has created the need for an additional janitor, and a full-time janitor will also be needed for the Cali Station in Colombia. An additional carpenter will be needed on Barro Colorado Island. A total increase of \$89,000 is needed for the above positions and other support for new and continuing research.

Administration (4 positions; \$58,000)

A secretary, a messenger, and two administrative clerks will be needed to support the enlarged staff. A total of \$58,000 will be needed for these and other increased administrative expenses.

RADIATION BIOLOGY LABORATORY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Regulatory biology <u>1/</u>	10	\$ 267,000	12	\$ 317,000	13	\$ 434,000
Solar radiation and environmental biology <u>2/</u>	10	235,000	13	331,000	13	364,000
Instrumentation and carbon dating <u>3/</u>	9	134,000	9	143,000	10	163,000
Facilities and maintenance <u>4/</u>	<u>11</u>	<u>469,000</u>	<u>12</u>	<u>563,000</u>	<u>12</u>	<u>585,000</u>
Total operations	40	\$1,105,000	46	\$1,354,000	48	\$1,546,000

1/ Studies of light-controlled reactions, such as seed germination, flowering, photosynthesis, phosphorus metabolism and ecology; pigments that absorb light and transfer energy to produce responses; transfer of light energy from pigments to metabolic systems; electron microscopy of cells and membranes of plants and animals.

2/ Measurement of sunlight incident to the earth's surface, changes in quality of sunlight, as influenced by seasons of the year and latitude; correlation of light, temperature, humidity, and nutritional effects on growth and development of plants and animals. Operation of stations to monitor and measure sunlight (at the Mall; Rockville, Maryland; Point Barrow, Alaska; Jerusalem, Israel and Flamenco Island, Panama). Maintenance of standards for calibration of instruments used by organizations around the world.

3/ Determining the age of geological and archaeological artifacts of cultural significance for the Smithsonian Institution and for other U.S. and foreign institutions and universities; paleoclimatic studies of the United States; design and development of new instrumentation for the Laboratory and other Smithsonian research programs.

4/ Rent for the 50,000 square foot building (\$250,000 per year), payment of utility services (gas, water, electrical services and trash removal); custodial and skilled mechanical personnel for maintenance of the buildings; supplies, contractual services and replacement of wornout mechanical parts (motors, blowers, pumps).

RADIATION BIOLOGY LABORATORY

1972 Actual.....\$1,105,000
1973 Estimate.....\$1,354,000
1974 Estimate.....\$1,546,000

Light is a key controlling environmental factor for the development and growth of biological systems. The storage of solar radiation as chemical energy in photosynthesis is basic for all life on earth. However, the utilization of radiant energy and stored chemical energy is regulated by subtle changing signals of light quality, duration, and intensity. A primary objective of the Laboratory's efforts is to explain the influences of the various factors in the environment--light, temperature, humidity, and atmospheric content--on the growth and development cycles of plants and to characterize the mechanisms through which environmental signals eventually manifest their effects on the developmental processes in living organisms. This is accomplished by studying the problems in the Laboratory under controlled conditions using biochemical, biophysical, and physiological techniques and then verifying the importance of these processes in nature by monitoring the natural, dynamic environment. Such programs of research by their very nature are long-term and require the concerted team efforts of many scientific disciplines.

The research of the Laboratory consists of three principal areas: (1) regulatory biology, (2) environmental biology, and (3) carbon-14 dating. From the initial charge that it be concerned with the effects of the sun's energy on earth's life, a major portion of the program of the Radiation Biology Laboratory has been devoted to the study of the responses of living organisms to various qualities and intensities of radiant energy.

Since its inception in 1928 the Laboratory has pioneered research on the influences of the spectral quality of visible light on plant growth and development. The present experimental program is of greater scope than in any other single laboratory in the country and perhaps in the world. The complexity of the problems studied is demonstrated by the number of disciplines within the program, which has a range through physiology, cytology, biochemistry, biophysics, physics, engineering, electron microscopy, and morphology. The Laboratory has been credited with major contributions in the field of photobiology.

In FY 1974, an additional \$168,000 is requested to extend the research efforts in regulatory biology and to provide adequate support for the on going research programs. In addition, \$24,000 is requested for necessary pay for staff.

The laboratory has as a phased major objective the completion of the relocated facility at Rockville, and the elimination of serious program shortages. A significant deficiency exists in the regulatory biology program, a research area of major emphasis that is primarily concerned with light-controlled plant and animal responses. These responses, influenced by light signals of varying degrees, help to trigger major changes in the reproductive and life cycles of plants, and in the migratory patterns of birds and animals. The FY 1973 funding level will allow continued progress to be made in outfitting and completing the controlled growth rooms over the next several years. About \$60,000 should be available in the base for this purpose, and when the prototype room is completed, tested, and made operational, additional funding requirements for equipping the balance of the Laboratory's rooms will be determined.

Research Instrumentation and Technical Support (2 positions; \$137,000)

In FY 1974, it is important that the Laboratory acquire a nuclear magnetic resonance spectrometer (NMR) to further efforts in basic regulatory biology investigations. Carbon-13 is now available in quantity for ecology studies as a result of the Atomic Energy Commission's new non-radioactive isotope program. Carbon-13 can be used as a non-radioactive tracer in productivity studies in the Chesapeake Bay and other tidal marsh areas. It can be incorporated into marsh grasses, then the chemical components of these grasses can be traced as individual chemical entities through hydrological cycles and food chains using the NMR technique. The Smithsonian has no NMR facilities, and no instruments with these capabilities are available for use in the Washington-Baltimore area.

A nuclear magnetic resonance spectrometer (\$110,000) is requested to make progress in several areas of research including the Laboratory's research on the Chesapeake Bay environs. The nuclear magnetic resonance spectrometer offers the only feasible technique for obtaining the chemical identities of many of the unstable phosphorus compounds associated with the release, by man, of phosphorous compounds into the environment. This technique provides an unequivocal identity and quantification even when the compounds have not been completely purified. Other techniques now being used require much more manpower for purification and characterization of the compounds but, provide only circumstantial evidence of chemical identity.

In addition, two positions consisting of an engineering technician and an instrument specialist (\$27,000), are needed to complete design and develop an ultraviolet monitoring instrument to be added to the current visible monitoring instruments at the various stations. These instruments would provide needed information concerning the amount of ultraviolet energy, as well as better define the short wavelength limits of ultraviolet radiation for agencies already using current monitoring data such as Tundra Biome program of the U.S. International Biological Program and the Department of Commerce.

Utilities, Mechanical, and other Support (\$31,000)

Greater utilization of utilities and equipment are anticipated, resulting in a need for additional funds, particularly associated with the operations of the monitoring stations. In addition, some funds to meet price increases in utilities and parts will be required to prevent the erosion of amounts in the program base of operations.

OFFICE OF ENVIRONMENTAL SCIENCES

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration <u>1/</u>	4	\$ 84,000	4	\$ 93,000	3	\$ 75,000
Ecology program <u>2/</u>	5	124,000	5	147,000	5	149,000
Oceanography and Limnology program <u>3/</u>	21	390,000	22	386,000	24	442,000
Center for Short-Lived Phenomena <u>4/</u>	<u>1</u>	<u>84,000</u>	<u>4</u>	<u>93,000</u>	<u>4</u>	<u>104,000</u>
Total operations	31	\$682,000	35	\$719,000	36	\$770,000

1/ Coordinates the activities of the programs in Oceanography and Limnology, Ecology, and the Center for Short-Lived Phenomena in addition to initiating and administering a number of national and foreign research programs directly. The Director serves as the primary representative of Smithsonian interests in the environmental and ecology field and develops broad interdisciplinary research and educational programs and projects that provide for the participation of scientists from all bureaus of the Institution.

2/ A new Center for Natural Areas, supported almost entirely with non-Smithsonian funds, has been established under the Ecology program in response to requests from Federal and non-governmental agencies to assist in the selection, procurements, and preservation of natural or primitive areas set aside for the purposes of research, education, or gene pool reserves for endangered species. It maintains an up-to-date computer registry of more than 10,000 U.S. natural areas. Significant activities in biological control and biological monitoring are initiated and operated through the Ecology program. The joint Smithsonian-Peace Corps program selects and places volunteer ecologist and environmental scientists with advanced degrees in developing countries that request assistance.

3/ Administers the Smithsonian Oceanographic Sorting Center in Washington, D. C. with federal funds and the Mediterranean Marine Sorting Center in Tunisia with foreign currency funds. Both constitute programs of environmental research services. Expansion of these services is anticipated in FY 1974 in order to meet the increased Federal requirements in environmental monitoring, research, and prediction-- including new federal programs in the Great Lakes and Chesapeake Bay. Ecological baseline studies of large lakes in Yugoslavia, South India, and the Caspian Sea are either underway or contemplated in the Limnology program.

4/ The Center for Short-Lived Phenomena operates a global electronic reporting network using the voluntary services of 2,700 scientists, institutions, and field stations located in 143 countries. The Center communicates data and information of changes in geophysical, biological, and ecological systems and works closely with disaster early warning programs and the worldwide environmental assessment programs (Earthwatch) of the United States Government and the United Nations.

OFFICE OF ENVIRONMENTAL SCIENCES

1972 Actual.....\$682,000
1973 Estimate.....\$719,000
1974 Estimate.....\$770,000

The Office of Environmental Sciences mobilizes the scientific resources of the Smithsonian in multidisciplinary approaches to the solution of urgent, contemporary environmental problems. The Office responds to a broad range of public inquiries on environmental matters and reviews programs of renders advice to, and conducts research for organizations such as the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, the Council on Environmental Quality, the Corps of Engineers and other agencies of the Defense Department, the Iran Foundation, the Arctic Institute of North America, and many others.

For FY 1972 a program fund increase of \$35,000 for the oceanography and short-lived phenomena programs and a necessary pay increase of \$16,000 are requested.

Ecology and Oceanography Programs (2 positions; \$25,000)

In cooperation with other U.S. and foreign scientists, the Office responds to national and international needs with projects that frequently enjoy support from other agencies and non-governmental sources. For example, in response to a request from AID, a Smithsonian parasitologist and aquatic ecologist have achieved remarkable progress toward the control of an incipient epidemic of schistosomiasis in Indochina that is likely to result from dams and water impoundments constructed along the Lower Mekong with U.S. assistance. This field research is an integral part of the Ecology Program's search to replace environmentally hazardous chemical pesticides with the biological control of non-agricultural pests in countries such as Peru, Iran, Thailand, Laos, Ghana as well as the United States.

Another example of the Office's contribution to environmental research are two oceanographic sorting centers (Washington and Tunis) which provide to more than 350 scientists from over 200 agencies and institutions much needed assistance in curatorial support, sampling design, biological analysis and data management, in addition to sorted specimens for research in systematic biology urgently needed to map out the effects of environmental change on living species. The Office is involved with national and international research programs in marine and freshwater research, and in increased emphasis upon terrestrial studies. Fifty scientists from nearly as many universities are cooperating in environmental impact studies in selected developing countries--a unique effort to measure for the first time the environmental consequences of significant development projects.

An increase in program funds of \$25,000 is requested to recruit a limnologist in the Oceanography and Limnology Program and a technician for the Oceanographic Sorting Center. The specialist in aquatic ecology is required to afford expertise in a critical field of expanding national and worldwide priority--how much and what kinds of pollution can be absorbed by fresh water sources, especially lakes. Baseline studies are needed in connection with Federal programs in water resources, Great Lakes studies and the problems of management of inland waterways. This increased focus on freshwater plants and animals requires additional technicians for the Sorting Center who will process and analyze samples made for the growing number of Federal programs.

Center for Short-Lived Phenomena (\$10,000)

An environmental early warning service, the Center for Short-Lived Phenomena, provides rapid communication of scientific information on short-lived environmental phenomena. By monitoring the natural environment, the Center improves opportunities for research by quickly collecting and disseminating information on events while environmental changes are still occurring. The United Nations recently asked that the Center assume the leadership role in organizing Earthwatch, the global environmental monitoring program approved at the Stockholm Conference on the Human Environment. An increase of \$10,000 in support costs is projected for the Center for Short-Lived Phenomena to allow sufficient funds to meet the increased demands of Smithsonian participation in the UN Earthwatch Program.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Research <u>1/</u>	8	\$128,000	7	\$ 98,000	11	\$215,000
Information transfer <u>2/</u>	1	16,000	1	14,000	4	79,000
Education <u>3/</u>	<u>1</u>	<u>16,000</u>	<u>2</u>	<u>28,000</u>	<u>4</u>	<u>79,000</u>
Total operations	10	\$160,000	10	\$140,000	19	\$373,000

1/ In FY 1972 work on the community action watershed program was begun, the Smithsonian joined the Chesapeake Research Consortium, and several new research projects were begun. Scientists from the Center were active in decisions regarding land-use planning. During FY 1973 20 research projects involving approximately 75 scientists were either begun or continued, and more formal liaison was developed with both state and federal agencies. The Center prepared exhibits on the research program for the Anne Arundel County fair and the Annapolis Festival (attended by approximately 150,000 persons). A major study of shoreline stabilization was completed. In FY 1974 the research program will be expanded to include new projects that fill important gaps, particularly plant ecology and soils science. The major results of the program will be channeled to management agencies as well as utilized as the basis for the education program.

2/ In FY 1972 emphasis was placed on applying ecosystem research results to land-use development issues. In FY 1973 formal liaison has been established with local planning and zoning agencies wherein a multi-agency, detailed land use planning program will be developed utilizing CBCES research results. Preliminary planning will be completed for undertaking a pilot study of a information transfer techniques involving citizens groups. The next year detailed land-use plan is expected to be developed using computer mapping techniques and citizen participation studies based on methodology derived from CBCES research program. A model for large-scale ecosystem description to be used for public awareness and information purposes will be developed if a seminar center and staffing are available.

3/ In 1972 requests for tours of CBCES increased 80 percent and some 1,200 local elementary school children visited the Center. Lack of staff for this purpose prevented accepting tour requests for 2,500 additional students. Work-study programs were provided for 19 graduate and undergraduate students. An experimental pilot program for ecosystem studies in urban and natural settings was designed for high school students. The model ecosystem study program is expected to be operational in the District of Columbia and Prince Georges County in late 1973, assuming staff support is available. Research is planned on the educational use of natural areas utilizing local elementary school students. Work-study programs for some 30 college students will be provided if dormitory facilities are made available. In 1974 an educational program based upon research on the use of natural areas will be formulated and instituted at CBCES. Experience with this program will be related to other similar areas in the U.S. Research in attitude formation on change among youths related to environmental education programs will be initiated. Student work-study programs will be expanded on a year-round basis.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

1972 Actual.....\$160,000
1973 Estimate.....\$140,000
1974 Estimate.....\$373,000

The Chesapeake Bay Center is a 2,000 acre area located on the Chesapeake Bay seven miles south of Annapolis, Maryland, about equidistant from Baltimore and Washington. It was established in 1965 for the purpose of creating scientific and educational programs in the environmental sciences leading to a more complete understanding of what is necessary for human health, welfare, and continued existence on earth. The development of these programs was made possible by the acquisition of a land-water unit large enough to include forests, marshes, fields, and agricultural areas that together form the mosaic of land uses characteristic of the mid-Atlantic region since its settlement. It shows the results of man's past and present activities as vital components of interacting physical and biological systems. The Center now provides a living museum of contemporary and historical significance, a primary resource for both teaching and research on complex living systems, and the largest facility in the nation available for the study of land-water (estuarine) relationships.

The budget for FY 1974 contains a request for an additional \$230,000 for research and support personnel and general operating expenses and an amount of \$3,000 for necessary pay for current staff.

The program of the Center has evolved to include: (1) research in the environmental sciences; (2) information transfer activities; and (3) education.

To further the research program of the Center, and to direct it to meet urgent national needs, the Smithsonian is participating in the Chesapeake Research Consortium, an organization including the University of Maryland, The Johns Hopkins University, and the Virginia Institute of Marine Science. The objectives of the consortium are to contribute to better management and control of a complex environmental system, and to define and coordinate the research which must be done to best contribute to the decision making process.

As a part of this research program the Center has become the focal point of a model watershed program for the Rhode River, a sub-estuary of the Chesapeake Bay along which the Center has 14 miles of shoreline. Data on land use history, ecosystem function, and socioeconomic trends and attitudes, is being collected in such a manner that it can be used in planning for long-term optimal use of the land and water resources of this watershed and its adjacent estuary, as well as for other similar sub-systems surrounding the Chesapeake Bay. The methodology developed at the Center for land use planning should have utility in many other regions of the United States. In addition to the consortium members, this model community action program is being developed and conducted in conjunction with the Anne Arundel County office of Planning and Zoning, the Maryland Department of Natural Resources, the Soil Conservation Service, the U.S. Geological Survey, the Department of Housing and Urban Development, as well as other agencies and academic institutions.

Information transfer activities include the dissemination of research results to appropriate planning and management agencies, as well as studies on techniques useful in the transfer of technical information to citizens' organizations and the general public. The education program consists of providing work-study opportunities for graduate and undergraduate students,

the provision of experimental field study programs for elementary school students, and the conduct of research on environmental education that focuses on the analysis of ecosystems in urban, suburban, and rural settings. It is planned that the developing program of environmental interpretation will be suitable for future regional ecological research centers.

The permanent staff of the Center presently consists of ten persons all of whom serve an administrative or support function. These persons are presently unable to handle the volume of inquiries, schedule the growing scientific and educational use of the Center, and administer its various programs. It is urgent that these activities go forward in FY 1974 in advance of the rapidly encroaching urbanization and industrialization of the region. Interest in the scientific and educational potential of the Center, and participation in the modest programs developed to exploit this potential, have grown exponentially in the last year, and now far exceed the financial resources of the Smithsonian that can be allocated to them. The selection of the Center as one of the primary research sites for the Chesapeake Research Consortium has resulted in the establishment of 20 research projects involving approximately 75 scientists from nearby universities and agencies. Still, vital gaps in plant ecology and soils science exist, and no scientists are presently employed for needed monitoring and long-term continuity and coordination of research. Requests for work-study experiences at the Center, from local schools alone, include the potential involvement of over 3,000 children.

The new staff requested for FY 1974 include a plant ecologist, a soils scientist, two research technicians, an education specialist, two maintenance men, and two clerical employees (\$100,000). Additional funds are requested for utilities, services, supplies, and equipment (\$130,000).

NATIONAL AIR AND SPACE MUSEUM

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration <u>1/</u>	7	\$189,000	7	\$182,000	8	\$197,000
Aeronautics <u>2/</u>	7	143,000	9	165,000	12	210,000
Astronautics <u>3/</u>	7	130,000	7	135,000	10	178,000
Science and technology <u>4/</u>			3	74,000	9	244,000
Information and education <u>5/</u>	3	52,000	2	24,000	4	52,000
Preservation and restoration <u>6/</u>	18	217,000	23	264,000	40	435,000
Experimentarium <u>7/</u>		23,000	3	68,000	6	113,000
Exhibits-advanced design and development <u>8/</u>	<u>—</u>	<u>—</u>	<u>2</u>	<u>158,000</u>	<u>2</u>	<u>763,000</u>
Total operations	42	\$754,000	56	\$1,070,000	91	\$2,192,000

1/ In FY 1972, 1973, and 1974 emphasis is on planning and overseeing building and exhibit design and construction.

2/ In FY 1972 two major exhibits were opened, "Ballooning" and "World War I Fighters." "Air Traffic Control" will open in FY 1973. In FY 1973 and 1974 staff research and curation will be strengthened.

3/ In FY 1972 hundreds of space artifacts were acquired, exhibits were up-dated, and work began on three major exhibits. In FY 1973 the Museum will open "Apollo," and "Life in the Universe." In FY 1973 and 1974 staff will be added to prepare for the new museum.

4/ In FY 1973 a new department will be created for the purpose of conducting research and preparing exhibits in areas of science and technology. In FY 1974 a full scale effort will be undertaken to develop significant science exhibits.

5/ Work began in FY 1972 to make the library a more useful research facility. In FY 1973 a series of nine astronomy lectures, "Man and Cosmos," will be held in cooperation with the Smithsonian Astrophysical Observatory. Additional education programs will be developed in 1974.

6/ In FY 1972 the Museum received 119,000 lbs. of artifacts and disposed of 35,000 lbs. of material. An intensive effort was made in re-warehousing artifacts for improved space utilization. Restoration work continued on the World Cruiser and Sparrow Hawk and work began on the Nieuport 83. In FY 1973 additional lower grade employees will be appointed to enable the mechanics to concentrate on restoration. In FY 1974, a full scale effort will begin to restore all of the air and space craft necessary for display.

7/ In FY 1972 the planetarium dome and housing were constructed in the old Air and Space Building. In FY 1973 the planetarium will be opened. In FY 1974 work will begin on devising equipment and programs for the 70-foot dome Spacearium in the new building.

8/ In FY 1973 an office will be created to plan, organize, and control all exhibits. During FY 1974 design, development, and prototype production of special electromechanical and multi-media exhibit units will be prepared for nine specific exhibits.

NATIONAL AIR AND SPACE MUSEUM

²
1971 Actual\$754,000
1972³ Estimate\$1,070,000
1973⁴ Estimate\$2,192,000

Fiscal year 1974 will be the critical year in the development of the new National Air and Space Museum. In FY 1973, Congress appropriated \$40 million (\$13 million in construction funds and \$27 million in construction contract authority) for construction of the new National Air and Space Museum building. The mandate is clear: establish between 4th and 7th Streets on the Mall a major national museum to open July 4, 1976, and communicate via dynamic exhibits and programs the entire heritage and narrative of American air and space flight.

The challenge is equally clear. A museum without exhibits would be useless. When it opens, the new museum must contain enough **inspiring**, involving, and entertaining exhibits and presentations so that it can serve as a premiere air and space museum and as a feature attraction on the Mall during the Bicentennial year. Precious time has gone by. The budget request for FY 1974 recognizes that the efforts concomitant with the aforesaid mandate and challenge must begin at an accelerated pace in 1974 in order to be ready for 1976. Funds must be provided for the necessary activities. Exhibit thematic units must be concepted, scripted, and designed. Aircraft and space vehicles must be refurbished and restored, and special projection techniques and shows must be developed for the Spacearium and ultra wide screen theater in the auditorium. The National Air and Space Museum staff must be augmented to accomplish all of these objectives.

In brief, we have been given the long sought new museum. We must now equip it to be worthy of its role. To meet these needs, a program increase of \$1,101,000 is requested for FY 1974. An additional amount of \$21,000 is sought for necessary pay for current staff.

Exhibits Scripting, Design, and Advanced Development (\$605,000)

An accelerated program costing \$763,000 will be initiated to ensure sufficient high quality exhibit hall development so that the July 4, 1976, opening of the National Air and Space Museum building presents the message of air and space achievement in a total educational.

inspirational, and involving context to the American public. FY 1974 is critical for the initiation of this major effort. Existing exhibit hall space in the Arts and Industries Building must be used and re-used to prototype and validate scripts, audio-visual modules, labels, graphics, and electromechanical demonstration units. These will, upon completion of a validation period, be dismantled, preserved, and stored to the greatest extent possible so that the new National Air and Space Museum building can open in 1976 with a sufficiency of exhibitry of a caliber matched to the high quality of the new building and the expectations of the American public. The then empty Arts and Industries Building hall will be used for other Bicentennial exhibits.

Specifically, in FY 1974, the requested funds will be used to support the following activities:

1. Design, development, and prototype production of special electronicmagnetic and multi-media exhibit units for nine halls.
2. Design, prototype development, and operational testing of an initial exhibit central control system, including program and information tape systems, solid state control systems, and a central functional test and alarm system.
3. Rental of environmentally controlled exhibit storage space for pre-1976 storage of replaced exhibit units in the developmental program.
4. Special evaluative studies of on-going prototype exhibits.
5. Complete design of a major audio-visual production for the Hall of Air Transportation, including curatorial research, scripting, artistic writing, filming, and taping.

Science and Technology Department (6 positions; \$169,000)

This department will be expanded by the appointment of four curators, clerical employees, and the addition of \$28,000 program funds to the base established in FY 1973. This increase is necessary to establish, for the Museum as a whole, a balanced perspective on air and space achievement. Major pre-1976 emphasis will be on pre-exhibit research for thematic units of primary importance to the Museum opening date. For example, thematic units due for scripting, design, construction, etc., which will need an intensive input from this new department are:

1. The Earthbound Benefits from Flight
2. The X Airplanes
3. Air and Space Guidance and Control
4. Understanding Air and Space Technology
5. Flight, Space, and Planetary Environments
6. Metallurgy and Chemistry of Air and Space, etc.

All of the above and similar thematic units will require the curatorial supervision of personnel intensively trained and experienced in various scientific and technological disciplines.

Specimen Collections, Research, Preservation, and Restoration
(26 positions; \$283,000)

A staff increase of 17 mechanics and helpers is requested so that it will be possible to use most profitably the three years before the NASM opening date for the preparation of aircraft, spacecraft, electronic equipment, computers, and subsystems needed for NASM building exhibits. Preservation and restoration activities must be initiated promptly and performed on an accelerated basis to overcome the handicap of long lead times normally required for curatorially sound artifact restorations. Concomitant activities will include substantial efforts of the aeronautics and astronautics departments to locate and collect needed vehicles, subsystems, and components, and to curate the use of these in the exhibits program. Six additional curatorial positions for these two departments, a clerk typist for the director's office, and two staff positions for the education department are requested.

Experimentarium/Spacearium (3 positions; \$44,000)

The transition of the small-scale experimentarium operation into the large-scale education and involvement role anticipated for the Spacearium in the new building will be initiated in FY 1974. The basic set of Experimentarium audio-visuals will have been developed and an initial presentation will be scripted and automated. The requested increase in staff size of three planetarium personnel will expedite and facilitate the development of sophisticated audio-visuals and more complex and innovative presentations. A fully staffed Spacearium operation will emerge in FYs 1975 and 1976, but FY 1974 will represent the first major thrust along this path.

CENTER FOR THE STUDY OF MAN

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
American Indian program <u>1/</u>	6	\$157,000	7	\$181,000	7	\$184,000
Urgent anthropology <u>2/</u>	1	20,000	1	21,000	1	21,000
Research <u>3/</u>	1	25,000	2	41,000	2	43,000
Immigration and ethnic studies <u>4/</u>	—	—	—	—	<u>3</u>	<u>80,000</u>
	8	\$202,000	10	\$243,000	13	\$328,000

1/ Work is heavily concentrated on the Encyclopedia of North American Indians. About 80 manuscripts have been received and are under review in the editorial process. Writing, data compilation, review, and editing will intensify in FY 1973 and FY 1974. Target date for beginning printing is in FY 1974 with requested Bicentennial funding. The goal is to complete the Encyclopedia by Bicentennial year 1976.

2/ Over 40 projects designed to salvage and preserve anthropological data in areas undergoing rapid change have been funded through FY 1972 with an additional 10 to 15 expected each year in FY 1973 and FY 1974.

3/ Involves the coordination of research which focuses anthropology on pressing world problems. At the Cairo, Egypt, conference in May 1972 about 50 anthropologists helped define four major problems on which anthropologists could contribute important knowledge: (1) education in the modernizing world; (2) social integration in the new nations; (3) social dislocation of people accompanying urbanization, industrialization and population growth; and (4) physical and mental health and social well being in different cultures. Several hundred anthropologists will be asked to contribute data. Progress reports will be presented to the Ninth Congress of the International Union of Anthropological and Ethnological Sciences in August-September 1973.

4/ Includes planned basic research on immigration.

CENTER FOR THE STUDY OF MAN

1972 Actual.....\$202,000
1973 Estimate.....\$243,000
1974 Estimate.....\$328,000

The Center for the Study of Man coordinates research and development on a series of important anthropological programs. The American Indian Program is presently concerned primarily with the development of the 20 volume Encyclopedia of North American Indians. Another aspect of this program is the development of a system for providing scholarly educational materials concerning Indians to individuals, schools, and Indian communities. In addition, the Center helps to coordinate educational intercommunication among Indians themselves, with scholars, and with appropriate government and private agencies.

The urgent anthropology program identifies, publicizes, and finances, by means of small grants, needed research in geographical areas that are undergoing rapid environmental change as a result of urbanization, improved communications, better transportation, and other factors. The objective is to salvage and preserve information in selected rapidly changing areas before time and events erase our ability to understand the cultures that existed.

The cross-cultural data retrieval program is coordinating the efforts of numerous anthropologists and other human scientists in developing new, comparative information on population, environmental, and educational studies.

The FY 1974 budget requests an additional \$80,000 program funds for immigration and ethnic studies and \$5,000 necessary pay for staff.

The comparative immigrant and ethnic studies program is carrying out basic research in the U.S, Canada, the circum-Caribbean area and the Panama Canal Zone. It investigates the special conditions which stimulate immigration; assesses the contributions made by immigrants; and studies the effects of immigration on the source country and on the target country. Field research, archival research, and statistical methods are all used.

The research area covered by this program has been shamefully neglected by modern social science. There have been no major studies of new immigrants for over 20 years. There is presently no knowledge of new immigrants from the Caribbean area despite the fact that they constitute a substantial portion of migrants to the U.S. It is imperative that studies be carried out on the patterns of migration especially from Central America and the Canal Zone because of the rapid changes presently taking place in those areas.

Comparative cultural ethnic studies will produce useful and important information for all agencies dealing with migrants. The knowledge gained from these studies will also be helpful in understanding labor recruitment, investment patterns, education, etc. The bearing of these studies on basic immigration policy will be obvious to officials responsible for legislation in that field. Finally, the implications of migration for basic population policy will be thoroughly explored in this research.

In order to conduct these studies a program director, a research assistant, and a secretary are required with support funds for travel, short-term special research contracts, and field equipment (\$80,000).

NATIONAL ZOOLOGICAL PARK

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Research program on animals <u>1/</u>	15	\$ 260,000	16	\$ 325,000	22	\$ 420,000
Education and exhibits <u>2/</u>	77	1,118,000	86	1,340,000	91	1,660,000
Operations and facilities management <u>3/</u>	<u>157</u>	<u>2,449,000</u>	<u>170</u>	<u>2,501,000</u>	<u>195</u>	<u>2,890,000</u>
Total operations	249	\$3,827,000	272	\$4,166,000	308	\$4,970,000

1/ During 1972 an assistant veterinarian was appointed to provide daily veterinary coverage as well as the improvement and extension of the disease control program. There have been eight projects planned or completed with the assistance of six research associates in the scientific research division. There are also four graduate students, eight part time pathologists, one full-time pathologist, a technician summer student, and visiting scientists using the research facilities. The plans for 1973 are to implement an adequate, effective quarantine program on newly acquired specimens; broaden NZP participation in all research projects with cooperating scientists; broaden the use of bacteriological examinations of sick specimens as well as autopsy cadavers; and improve all services and research efforts. In 1974 the Zoo will continue with radio-telemetric studies, marmoset research program, and studies of animal behavior, reproduction, and nutrition.

2/ The Zoo presents one of the largest and most varied collections of exotic animals in existence. The staff scientist and head keepers collaborate with the divisions of animal health, scientific research, and pathology to improve the medical treatment of animals. The office of information and education has prepared approximately 200 TV and press notices, answered 300 letters, and mailed 22,000 pieces of informational material. The plans for 1973 are to improve the animal collection by increasing the variety of species while reducing the number of animals; prepare labels that will be more informative; update the "care" sheets for pets; and design educational exhibits needed to interpret the living collection of animals to visitors. In 1974 emphasis will be to formulate and supervise new research on endangered species, to plan a husbandry program, and assist in other research projects. In accordance with the Zoo's new master plan, a fresher and more modern approach to the present type of labelling and new natural habitat type cages that involve major aspects of technical and graphic design will be undertaken.

3/ In 1972 the operations and maintenance department met its responsibilities for basic maintenance and repair although 22 percent of authorized positions were frozen. A new method of manure disposal and solid waste disposal was introduced that improved sanitation and saved manpower. Further progress was made toward the planned, cycled replacement of all vehicles and other major equipment. Experiments with electrostatic painting of fencing, rails, bars and other metal work were successful, and this method will greatly reduce the man-hours required for this routine upkeep. The plans for 1973 are to provide better police protection to the visitors, employees, and government property; to implement other manpower savings by further technological innovations, and to bring the motor vehicle maintenance activity up to modern standards. In 1974 emphasis will be to examine various activities for ways to expedite the operations and to save on manpower and supplies.

NATIONAL ZOOLOGICAL PARK

1972 Actual.....\$3,827,000
1973 Estimate.....\$4,166,000
1974 Estimate.....\$4,970,000

The National Zoological Park was established in 1889 for the "advancement of science and the instruction and recreation of the people." To accomplish this mission, the Zoo exhibits a broad collection of animals from all parts of the world in natural surroundings, maintains an information and education program for the benefit of the visiting public from all over the United States, and promotes scientific research, including biomedical programs, for increased scientific knowledge and for the benefit of the animals so that visitors can enjoy them in prime health.

The number of visitors increases annually. In FY 1972, approximately 5,549,000 visited the Zoo. Since the arrival of the Giant Pandas in April, attendance has increased 27.2 percent. A significant number of these visitors are in organized school groups from the metropolitan area and more distant points. The Zoo is increasingly used as a teaching site by teachers of biology and other natural sciences.

Continued progress has been made in improving the quality of the animal collection. The outstanding improvement this year was the acquisition of the two Giant Pandas. As the collection evolves, the Zoo will present exhibits of greater visitor interest emphasizing those species and groups which demonstrate significant points of animal adaptation and behavior. Greater emphasis will be placed on increasing zoo births. This will be accomplished by pairing unmated animals, maintaining breeding groups, and conducting research in reproductive behavior of endangered species, such as the Golden Marmoset. Such a program not only reflects good conservation practices, but is essential in view of increasing scarcity of many species and the higher costs to obtain them.

A program increase of \$690,000 is requested for FY 1974 to: meet the research needs for special studies and programs; improve the animal care and educational aspects of the Zoo; and for better maintenance of the physical plant and police protection. An amount of \$114,000 is required for necessary pay.

Research Program on Animals (6 positions; \$85,000)

The department of zoological programs consists of scientific research projects and associated scientific education. Included are studies related to animal behavior, reproduction, and nutrition. The continuing studies on lead poisoning and selenium-vitamin E deficiency and their impact on the animal collection are vital to the NZP and to the broader fields of animal science, zoo veterinary medicine, and human medicine. The program also provides training and research opportunities for graduate students.

Before the end of FY 1973 the electron microscopy laboratory will be completed and in operation. This facility will add depth and new horizons to the investigation of animal health programs. The Zoo has been engaged in radio-telemetric studies for the past two years in Panama and wants to extend such work to northern South America. Plans for field work in Uganda will involve the use of radio-telemetry for the next ten years. One zoologist position is required to provide support for this field work (\$19,000).

The Marmoset research program will be an integral part of the scientific research effort during the next five years. One biotechnician and three animal keeper positions are needed to carry out the Marmoset breeding program (\$41,000).

During the last fiscal year, some 15 manuscripts were accepted for publication. One secretarial position is requested to aid in coordinating the activities and typing the manuscripts of the staff scientists, research associates, and graduate students (\$11,000).

Additional funds are sought to cover costs of publications, contracting various portions of research projects to professionals working with this institution, and for research supplies and equipment (\$14,000).

Education and Exhibits (5 positions; \$280,000)

With the expanded activities in research and conservation, a professional approach must be followed to apply the animal management techniques that are fast becoming available to the conservation-oriented zoological world. This will require the services of trained biologists in each of the animal groups to supply exotic animal management expertise. Two assistant curator positions are requested to implement collection planning and help formulate and supervise a husbandry plan for the small mammal and large carnivore groups (\$30,000). Additional funds are required to meet steadily rising food prices, to purchase other necessary items to maintain a healthy collection of animals, and for sundry supplies, uniforms, and equipment (\$39,000).

The division of interpretation is responsible for disseminating general information to the public; preparing press releases; assistance with TV coverage; documenting unusual and important events occurring within the Zoo; aid and assistance to freelance, staff, press, and movie photographers; and for labeling the entire collection. The Zoo's interpretive and educational exhibits now consist chiefly of cage labels. Under the Zoo's new Master Plan, a fresher and more modern approach to the present type of labeling is essential. This means the creation of approximately 2,500 labels and the production of many educational panels and exhibits. Three positions, exhibits designer, exhibit specialist, and secretary, will be used to undertake projects involving major aspects of technical and graphic design (\$37,000).

In modern zoos, materials such as molded fiberglass are used extensively to simulate rocks, tree stumps, and plants. Cage decorations thus far have been improvised by animal keepers, using branches, rocks, mosses, and other materials to meet the requirements of animals for perching, climbing, privacy, shade, etc. Plans for fabrication work will be accomplished by contractual service. Funds are requested to implement the program for up-to-date information and exhibition (\$140,000).

At the present time, the Zoo attempts to answer many thousands of requests for information by furnishing a mimeographed hand-out entitled "Highlights of the National Zoo". This does not take the place of a well designed brochure. Such a brochure has been designed and a small quantity has been printed. With an annual attendance of over five million people, a further printing should not be less than 100,000 copies. This will cost \$20,000.

With the growth of the professional-research-medical staff, the requests for informational labels, scientific books and journals, and film reproduction have increased. Funds are requested to cover costs of supplies, services, books, and equipment (\$14,000).

Operations and Facilities Management (25 positions; \$325,000)

The visitor rate climbs steadily, intensifying park traffic problems and requiring all patrolmen be assigned to traffic duty during peak periods. This leaves no patrolmen in the visitor areas during these periods. Crimes are on the increase. Two additional police positions are needed to protect visitor areas. One clerk typist position is needed to perform administrative duties now done by officers who should be on patrol duties. Forms that are required to be typed cover police activities, personnel manning, park safety, and requisitions for supplies and equipment. Additional funds are requested to meet the increased costs of supplies and uniforms (\$36,000).

As the number of personnel in the Zoo increases and programs expand, the demand for receiving and storing supplies and the costs for utilities, supplies, travel, contractual services, and equipment increases. One supply clerk position and funds to meet the rising cost and usage of other items are requested (\$21,000).

There is a need for additional engineering knowledge for the efficient operation of the Park, including the drawing up of specifications for small service contracts, as well as for repairs, remodeling, services, etc. to existing structures. One engineering position will assist in the day-to-day decisions on changes, repairs, and additions to the Park which have to be handled at once to guarantee its uninterrupted operation (\$22,000).

The wear and deterioration of the facilities from the action of time, elements, visitors, and animals create a heavy corrective maintenance workload, leaving little time for preventive maintenance. Many of the facilities are in a state of disrepair and deterioration and there is a large backlog in the various trades. Five mechanical positions and four general maintenance helper positions with funds for building supplies are required (\$114,000).

Negotiations are now underway for the possible acquisition of a site in Virginia for a breeding farm for animal raising, conservation, and study. Should this or another site be acquired a portion of the requested maintenance funding would be applied to basic initial needs of the farm.

By FY 1974 this Division expects to have a backlog of 35,000 man-hours of tree maintenance, landscaping, and gardening. Much of the backlog is due to a loss of 120 large shade trees that must be removed. Every effort should be applied to preventive maintenance in order to save the larger trees. One tree maintenance worker and two general maintenance worker positions and funds for supplies and equipment are needed to assist in reducing the backlog. Additional funds are requested to permit an increase in temporary employees to assist in the seasonal workload (\$51,000).

The special holding areas for animals with low tolerance for climatic change require constant surveillance and planned preventive maintenance. Maintenance is still at a high level resulting in a heavy work load during emergency shut-downs or with work in progress during requested installations or changes. One refrigeration mechanic is not sufficient to meet the emergency demand and provide for a preventive maintenance program. One

additional such position will bring the manpower up to acceptable standards for the safety of personnel and animals and maximum operating efficiency (\$14,000).

One general maintenance worker position is requested to assist the mechanics and journeymen in servicing vehicles and keeping the garage area clean. Additional funds are requested to meet the increased cost of gasoline, parts for motors, and equipment replacement (\$19,000).

The labor force is responsible for assisting mechanics, maintaining the fifteen major buildings, twelve public rest rooms, and sixteen employees' restrooms in a clean, presentable, and sanitary condition, and removing trash left by visitors over the 156 acres of Park grounds. The walkways in the eight public buildings are scrubbed with detergents and disinfectant once a week and swept once a day. As the visitors increase, the demand for laborer and custodial services increases. Taking into consideration annual and sick leave and the 40-hour work-week schedule requirement, an increase of one laborer leader, one janitor leader, two laborer and two janitor positions is needed to meet this schedule and to maintain efficiency in operations (\$48,000).

FORT PIERCE FACILITY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Oceanographic research <u>1</u> /					3	\$100,000

1/ Includes studies of the survival mechanisms of marine organisms under pressure, the life cycle and behavior of reef building worms, and the effects of shallow water pollutants on marine animals.

FORT PIERCE FACILITY

1972 Actual.....\$ 0
1973 Estimate.....\$ 0
1974 Estimate.....\$100,000

The Fort Pierce Facility was established in Fort Pierce, Florida, to complement the oceanographic research programs of Smithsonian Institution. Based there are the Smithsonian-owned research submersible, the Johnson Sea-Link, and the Smithsonian--operated Government vessel, the R/V Johnson, which serves as the submersible's tender.

Smithsonian-supported scientists are studying the survival mechanisms of marine organisms under pressure, the life cycle and behavior of reef building worms (Sabellariid), and the effects of shallow water pollutants on marine organisms. These studies are being conducted in cooperation with a number of local foundations and educational institutions whose shared laboratories, shops, and other facilities supplement the Smithsonian-owned shop building and maintenance equipment. Additional undeveloped land is expected to be added to the Smithsonian's resources in Fort Pierce where related botanical research can also be carried out.

The research arrangement at Fort Pierce, initially launched under private funding, has proved its worth. Shared funding will enable us to continue rewarding scientific research operations there, in cooperation with other institutions, facilitate more effective use of resources, and attract needed scientific talent and additional outside funds. The budget request for FY 1974 would provide funding for three positions (director, assistant director, and secretary) and for travel, supplies and materials, equipment, and research grants.

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration of History and Art programs <u>1/</u>	4	\$129,000	4	\$ 89,000	4	\$ 91,000
American studies program <u>2/</u>	2	44,000	2	47,000	2	48,000
Editing of Joseph Henry Papers <u>3/</u>	<u>3</u>	<u>48,000</u>	<u>3</u>	<u>48,000</u>	<u>4</u>	<u>70,000</u>
Total operations	9	\$221,000	9	\$184,000	10	\$209,000

1/ Advises and assists the Secretary in planning, implementing and reviewing the progress of Smithsonian history and art programs.

2/ Organizes and conducts a formal program of graduate education in the material aspects of American civilization, During FY 1972, approximately 30 graduate students were enrolled in the program through cooperating universities. Similar numbers are expected in FY 1973 and FY 1974.

3/ During FY 1972 the first volume of the Papers of Joseph Henry was completed and publication will occur in FY 1973. This is the culmination of five years of planning and of an extensive effort to gather the unpublished manuscripts of Joseph Henry (1797-1878), a pioneer American physicist and the first Secretary of the Smithsonian Institution. This project is part of the national program to publish the papers of notable Americans launched by President Truman after the appearance of the corresponding volume of Thomas Jefferson. It is the only project of its kind in the world with a computerized catalog of source materials.

With much of the preparatory work accomplished and with the practical experience of actually preparing a volume, the staff of the Henry Papers is now in a position to move from prototype to the intensive production of subsequent volumes. To accomplish this transition requires an additional historian qualified to perform the intensive research on Henry's career, particularly on the origins of Federal scientific policy and the relations of the scientific community with American society at large. Production should not be allowed to lag in view both of the opportunity to exploit the gathered resources and the need to provide all segments of the public with authentic data on the roots of many current problems in our nation.

1972 Actual.....\$221,000
1973 Estimate.....\$184,000
1974 Estimate.....\$209,000

The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing and reviewing progress of Smithsonian history and art programs. This office assists in planning, coordinating, and reviewing the work of the various history and art bureaus and offices within the Smithsonian. The bureaus and offices reporting to the Assistant Secretary for History and Art are Archives of American Art, Cooper-Hewitt Museum of Decorative Arts and Design, Freer Gallery of Art, Joseph H. Hirshhorn Museum and Sculpture Garden, National Armed Forces Museum Advisory Board, National Collection of Fine Arts, National Museum of History and Technology, National Portrait Gallery, Office of Academic Studies, Office of American Studies, Office of Seminars, Smithsonian Archives, Joseph Henry Papers, and the Bicentennial of the American Revolution Program.

The Office of American Studies organizes and conducts a formal program of graduate education in the material aspects of American civilization. This office also participates in the overall program of historical, archaeological, and architectural history research at St. Mary's City, Maryland, funded by the State of Maryland, National Endowment for the Humanities, Rockefeller Foundation, and other foundations.

The Editor of the Joseph Henry Papers and his staff have been gathering together the unpublished manuscripts of Joseph Henry (1797-1878), a pioneer American physicist and first Secretary of the Smithsonian Institution.

A program increase of \$21,000 is sought to strengthen the staff of the editor of the Joseph Henry Papers staff. Necessary pay in the amount of \$4,000 is sought for the office.

Five years of work in the Henry Papers have recently come to fruition in the completion of the text for the first volume of this documentary historical work. Publication is scheduled for early FY 1973. During these years the staff has conducted an extensive, world-wide search for documents; cataloged and indexed 20,000 of these on an unique computerized system; and planned and executed the first, prototypical volume. This endeavor is part of the national program to prepare comprehensive, scholarly editions of unpublished manuscripts of great Americans. While the present program dates from President Truman's positive reaction to the first volume of the Jefferson Papers, its roots are much older. The Federal government, almost from its inception, has supported the preparation and publication of collections of historical documents. An informed citizenry, it was felt, needed authentic information on the nation's past, if only to understand the origins of present dilemmas.

A pioneer American and the first Secretary of the Smithsonian Institution, Joseph Henry (1797-1878) was chosen for inclusion in the documentary publications program by the National Historical Publications Commission because of the existence of many valuable unused manuscripts which would shed light upon national developments and issues, many still unresolved. Among these are the origins of Federal science policies, the emergence of an American scientific community, the place of the sciences in educational institutions, the often tangled interplay of theoretical scientists and practical endeavors, and the relations of the scientists with other groups

in the American society. The intention is to print an extensive, but selected, edition with full commentary and annotations, making the unselected documents available to all in the form of microfilm. The printed volumes are not simply designed to be works of scholarly reference but to serve also as authentic sources of information furthering public insight into the place of the sciences in the nation's history.

The principal need presently is for additional research staff in order to bring subsequent volumes to press expeditiously (\$18,000). It is essential to complete the computer cataloging, to select the best items for transcription and editing, and to perform research required for explaining these texts. The Henry Papers is moving from a period of necessary preliminaries to one of research and interpretation exploiting the little-known manuscript resources so laboriously gathered and organized. To accomplish this requires the addition of a scholar of suitable training and competence. An amount of \$3,000 is required for necessary supplies, equipment, and other office costs.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
National collections <u>1/</u>	37	\$ 658,000	43	\$ 936,000	46	\$1,486,000
Exhibits research and planning <u>2/</u>	12	180,000	15	191,000	15	191,000
Scholarly research and higher education <u>3/</u>	34	648,000	34	668,000	37	818,000
Public information and education <u>4/</u>	38	595,000	34	615,000	36	667,000
Bicentennial activities <u>5/</u>	<u>16</u>	<u>376,000</u>	<u>24</u>	<u>425,000</u>	<u>26</u>	<u>625,000</u>
Total operations	137	\$2,457,000	150	\$2,835,000	160	\$3,787,000

1/ Rapid collections growth, nearly 100 percent by gift, required that in FY 1972 museum management undertake to develop an overall collections management system. Studies of registration (collections management) activities in this museum in FY 1972 indicated that procedures must be improved. The Office of Collections Management was established in FY 1973 but is under-funded. Adequate funding in FY 1974 will enable this program to become fully operational. Storage facilities and equipment have been improved slowly but are still far below acceptable standards. Eventually the collections management program will lead to computerization of all information concerning the collections now involving more than 16,000,000 items.

2/ FY 1972 saw planning and design completed for new Halls of Numismatics, Photography, Printing, and News Reporting, and the partial modification of the Hall of Philately. The disastrous fire of September 1970 made this work necessary. The halls were completed and opened in FY 1973 at a cost of nearly \$2,000,000 in cash and manpower. Two major temporary exhibits, the "Right to Vote" and "American Productivity," will open in FY 1973. Planning and design of the major new permanent exhibit, "Of the People, By the People, For the People," will be completed in FY 1973 and the exhibit will open in FY 1974.

3/ The NMHT research function continued during FY 1972 with the publication of 140 books and articles (195 to be published in FY 1973). During FY 1973 initial planning was completed for the establishment of the Eisenhower Institute for Historical Research in United States Military History. The Institute and other areas of research will be developed in FY 1974.

4/ The NMHT is Washington's major visitor attraction, with attendance at nearly 6,000,000 in FY 1972, nearly 7,000,000 in FY 1973, and an expected attendance of 15,000,000 by 1976. A major effort is underway to provide numerous live public demonstrations in the years ahead. Plans for live demonstrations are complete for several exhibits, and during FY 1973, demonstrations will be implemented on a limited scale in the Music Machines exhibit, Hall of Printing, Hall of Photography, and the Hall of Textiles. This popular activity will be expanded in FY 1974.

5/ FY 1972 and FY 1973 were years of substantial progress in planning for the Bicentennial years. Planning for the major exhibit, "A Nation of Nations," will be completed in FY 1973. Exhibit construction will begin with funding anticipated in FY 1974. If funding is provided, the NMHT is prepared to assign approximately 50 percent of its manpower to this great exhibit in 1975 and early 1976.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

1972 Actual.....	\$2,457,000
1973 Estimate.....	\$2,835,000
1974 Estimate.....	\$3,787,000

The National Museum of History and Technology occupies a unique position among the great museums of the world. As the repository of the National Collections documenting the historical and technological achievements of the American people, the Museum has responsibility for over 16,000,000 objects related to all facets of the American experience. Each of these objects must receive the highest level of professional care and preservation. Objects must be stored and exhibited using the best known techniques.

The NMHT has provided a variety and richness of public exhibits seen by over 50,000,000 visitors. The Museum annually receives more visitors than any other building in Washington, D.C. and millions more than any other museum in the world. As the most visited museum in the world, it will be host to almost 7,000,000 visitors during FY 1973. It is anticipated that this figure will more than double by the Bicentennial year, 1976.

As a center for the scholarly study of the history of American civilization and the history of science and technology, this Museum continues to support and encourage basic research and publication in many subject fields, ranging from early exploration to studies of contemporary American culture.

For FY 1974, an additional \$882,000 in program funds is requested for the development and operation of the new collections management and computerized inventory programs of the national historical collections; the prevention of deterioration of objects in storage and on public view; the acquisition of new objects of historical importance; implementation of the Eisenhower Center for military history; scholarly research of popular music and other research; expansion of music performance program and live demonstration of exhibits; for additional clerical support to the professional staff and the addition of several historians. An amount of \$70,000 also is sought for necessary pay for current staff.

The NMHT has skyrocketed to a position of world prominence in the nine years it has been open to the public. Extremely heavy attendance has overtaxed this Museum's financial and staffing capability in some vital professional areas. It has limited the implementation of some innovative programs and demonstrations in public areas. Existing shortages must now be corrected to avert a reversal of the pattern of success.

Collections Management (3 positions; \$550,000)

The number and quality of accessions (mostly by gift) continue to increase by tens of thousands of items each year. While maintaining its unique position in acquiring, caring for, and exhibiting the nation's historical treasures, the NMHT has developed a huge backlog of essential documentation and storage problems. Continually restricted annual budgets have precluded an adequate level of curating. The national historical collections now contain more than 16,000,000 items which are inadequately preserved, stored, recorded, and cataloged. No overall museum-wide registration system existed prior to FY 1973. The security of collections of inestimable value is constantly in jeopardy. Approximately \$60,000 of regular operating funds will be diverted from other programs in FY 1973 to implement new registration

procedures. If this program is to expand, additional funds must be provided. By late 1974, when the first stages have been completed, a massive computerization phase of this program will begin and for the first time NMHT holdings will be readily accessible to researchers. For FY 1974 three positions to improve receipt and registration procedures and funds for the design and equipping of a modern records management and inventory system are requested (\$150,000).

Preservation of objects on exhibit and in study collections is another area of long-term problem. Inadequate funding has limited preservation and restoration to stop-gap measures. Deterioration of prized national treasures can and must be halted. Improved storage equipment and contract services to augment in-house perservation work are required (\$150,000).

Although the NMHT continues to attract numerous accessions by gifts, the really great and important objects are usually available only by purchase. During FY 1973 a small purchase fund (\$50,000) was established. To begin to compete with other museums and collectors, this annual fund must be augmented by \$250,000 per year beginning in FY 1974.

Eisenhower Center, Expansion in Popular Museum and Other Research (7 positions; \$150,000)

Public Law 87-186 (approved August 30, 1961) authorized the Smithsonian to establish a scholarly research center to promote the understanding of the historic role of the armed forces in context with the whole history of American civilization. After careful planning by the National Armed Forces Museum Advisory Board, established under the Act to advise and assist the Regents, and the NMHT, the Museum is prepared to implement and develop the Dwight D. Eisenhower Institute for Historical Research. During the Bicentennial period, the Institute's program will be oriented especially to provide deeper insight into and understanding of the background of our Continental forebears and their struggle to establish the world's first modern republic. An internationally prominent military historian will be engaged to direct the center. A secretary and office support costs must also be provided (\$35,000).

Other largely ignored areas for productive research should receive strong attention in FY 1974. Research in the history of popular music must be undertaken by the NMHT to fill a void. The Museum has a notable collection of musical instruments which is said to be the finest outside of Europe. Research in classical music and musical instruments has long been carried out by the Division of Musical Instruments. Now is the time to study the history of popular music. Curation and research into neglected aspects of American civilization concerning food, shelter, clothing, communication and transportation should begin. There is an important requirement for two additional historians with clerical assistance and program development funds (\$115,000).

Demonstrations of Machinery Printing and Music, Funding Music Performances, Recordings and Publications (\$182,000)

Great success has been experienced with limited trial funding in these areas. Part-time employees presenting periodic demonstrations managed experimental demonstrations, which have enabled visitors to better understand and appreciate exhibits they were viewing. It is planned to continue these demonstrations on a full-time basis and to plan live demonstrations in additional exhibits.

The Museum's music performance program has been highly acclaimed by music critics. The NMHT has a core staff of music historians and scholars capable of additional assignments. The performance, music recording, and publication programs will be substantially expanded in FY 1974.

Funds are required in FY 1974 for part-time demonstrators especially on weekends and holidays; use of contract musicians; preparation of recordings; and the publication of museum guidebooks, scholarly books and catalogs, and low cost educational and public information materials for free distribution (\$182,000).

NATIONAL COLLECTION OF FINE ARTS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Collections management and use <u>1/</u>	39	\$ 656,000	43	\$ 689,000	43	\$ 905,000
Exhibitions (including Renwick Gallery) <u>2/</u>	17	453,000	22	573,000	25	660,000
Public education <u>3/</u>	2	59,000	4	79,000	5	161,000
Research and training <u>4/</u>	<u>1</u>	<u>53,000</u>	<u>1</u>	<u>55,000</u>	<u>2</u>	<u>84,000</u>
Total operations	59	\$1,221,000	70	\$1,396,000	75	\$1,810,000

1/ This activity includes the selection, acquisition, and care including conservation, of paintings, sculptures, prints and drawings, photographs, and archival materials.

2/ Under this heading is a permanent and temporary exhibits program in the Fine Arts and Portrait Galleries Building (FA&PG) and in the Renwick Gallery. It also includes the domestic and international traveling exhibit programs.

3/ This includes the production and distribution of educational materials and the tour program for school children. Plans call for the extension of educational services in the Renwick Gallery, the development of additional workshops, and the creation of an introductory gallery in the FA&PG to complement the special children's gallery.

4/ Program activity in this category includes support to scholars at the graduate and post-graduate level to research and interpret various areas of the collections. Their studies generally result in publications including materials for use in connection with exhibitions.

NATIONAL COLLECTION OF FINE ARTS

1972 Actual.....\$1,221,000
1973 Estimate.....\$1,396,000
1974 Estimate.....\$1,810,000

The National Collection of Fine Arts, the oldest national collection of art (containing some 15,000 works of art), is devoted to the conservation, study, and presentation of American painting, sculpture, prints and drawings, and American design and crafts. It circulates exhibitions both throughout this country and abroad, maintains an active program of public education at all levels, engages in research and publication on American artists, and maintains (with the National Portrait Gallery) a laboratory for conservation and conservation research in American painting.

The requested program increase of \$386,000 will mainly be directed toward the conservation of works in the collections and the purchase of additional works that become available. A substantial part will also be used to support the exhibition and education programs of the Renwick Gallery opened in 1972. The operation of this separate building with its active and effective program has put an unforeseen strain on several departments of the Museum, most notably Education and Exhibition. An additional \$28,000 is needed for pay for the existing staff.

Collection Management and Use (1 position; \$200,000)

The permanent collection of several thousand works was neglected for a great many years and is badly in need of restoration. Many works now hanging in the galleries are not in proper condition and, in addition, many need reframing for proper exhibition. A great many other works not now shown need basic restoration so that they can be shown either in the galleries or in the lending program (almost 2,000 works are on loan to Federal buildings). Existing conservation personnel can make little headway on this extraordinary backlog of work, and the situation deteriorates each year. A special allotment of \$60,000 is requested for work on the permanent collection of painting and sculpture. This would be sufficient to rehabilitate 50 to 100 paintings each year, in addition to those that can be worked on by the permanent staff. Their condition should not be allowed to deteriorate further.

The Conservation Laboratory, which serves both the National Collection of Fine Arts and the National Portrait Gallery, needs a facility for the restoration and conservation of works on paper to care for the growing collection of prints and drawings. An assistant conservator specializing in paper is requested and funds for outfitting the laboratory for this work (\$13,000).

For the full establishment of the photographic archives set up in FY 1973, \$20,000 is requested. This is chiefly for equipment and photographic services for incorporating, among other material, the Juley Archives (of 117,529 photographic negatives) for which the National Collection of Fine Arts has been paying for some years, into an active, usable reference tool.

Efforts to acquire sufficient funds for purchases continues. While gifts of art are the main source of acquisition (amounting in value to over \$350,000 in FY 1971 and over \$312,000 in FY 1972) the National Collection cannot totally rely on private donations to build a representative collection. An amount of \$107,000 is requested for this purpose which with the \$60,000 in the base will provide about 75 percent of the target goal of an annual \$200,000 purchase fund.

Exhibitions (2 positions; \$78,000)

The additional exhibition space, made possible by the opening of the Renwick Gallery has reinforced the need for a curator of exhibits for the Renwick Gallery. A clerk-typist is also needed for the Renwick Gallery to handle the heavy volume of inquiries and correspondence and to serve as a back-up in the absence of the one secretary. These two positions will cost \$22,000.

Rising costs in installation, packing, shipping, and insurance have much increased the costs of temporary exhibitions. This is particularly acute in the Renwick Gallery which is concerned largely with objects on loan which are often bulky and expensive to move. To maintain the kind of exhibition schedule initiated in the museums, additional funding of \$45,000 is requested.

An amount of \$11,000 is required to print a guide to the building, exhibitions, and collections which is made available to visitors and correspondents.

Public Education (1 position; \$80,000)

The public education program is an essential and closely integrated part of the museum operation. As it has grown, the administrative burden has increased tremendously. Not only does the staff maintain close contact with the District schools and with growing educational programs elsewhere, it trains and supervises a crew of some fifty volunteer docents for two museums. There is now sufficient workload to justify the addition of an assistant curator of education to handle much of the actual docent training and general operation of the Department. This will ease the administrative burden on the research and curatorial staff. Funds are also needed to provide educational materials for school activities through the country (\$80,000).

Research and Training (1 position; \$28,000)

In FY 1973 the Museum will add to its program of visiting scholars a program of museum training offering practical internships in all phases of museum operation. Until now this entire program has had to rely on temporary appointments for clerical and administrative support. This is not efficient or economical. A full-time secretary is needed to provide that office with permanent staff support. To continue the program of visiting scholars and professional trainees an additional \$20,000 is needed.

NATIONAL PORTRAIT GALLERY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Expansion and care of the collection <u>1/</u>	11	\$288, 000	13	\$379, 000	15	\$591, 000
Research, publications and training <u>2/</u>	9	176, 000	9	154, 000	10	196, 000
Catalog of American Portraits <u>3/</u>	8	113, 000	12	175, 000	12	180, 000
Public education: exhibits production and interpretation <u>4/</u>	<u>12</u>	<u>347, 000</u>	<u>14</u>	<u>344, 000</u>	<u>15</u>	<u>451, 000</u>
Total operations	40	\$924, 000	48	\$1, 052, 000	52	\$1, 418, 000

1/ FY 72-Located, researched and acquired 99 portraits: 37 by gift (valued at \$175, 000), including 2 Presidents new to the collection--Cleveland and Nixon; and the remainder by purchase (\$80, 000) including President Taylor, also not hitherto represented. FY 73-Add \$50, 000 to acquisitions. FY 74-Add \$170, 000 establishing a fund of \$300, 000. Increase conservation support.

2/ FY 72-Research and publications for major loan exhibitions--Portraits of the American Stage, 1771-1971, and "If Elected..."Unsuccessful Candidates for the Presidency 1796-1968, as well as several smaller exhibits. FY 73-Research first Bicentennial exhibition and monograph, In the Minds and Hearts of the People: Prologue to Revolution 1760-1774; prepare publications related to a major exhibit on The Black in the American Revolution. Research several smaller exhibitions, such as the Lazzaroni (19th century scientists), and Noted American Women. FY 74-Research major exhibits and publications on Life Portraits of George Washington, and The Black in America from the Early Republic through Reconstruction.

3/ FY 72-Established field office in South to launch survey of portrait data in Florida, Georgia, and South Carolina. Added 8, 000 portrait records into computerized reference files and serviced 400 public requests for portrait information. FY 73-Add additional researcher to accommodate new data from the field and convert reporting to more efficient microfiche generated directly by computer. FY 74-Survey in new regions and increase service to public by publishing reference tools such as biographical indexes.

4/ FY 72-Installed two major loan exhibits, each requiring the borrowing and installation of approximately 80 portraits and several hundred associative objects. Installed 2 educational exhibits on the history of the District of Columbia and several portrait presentations for 250, 000 visitors, with 12, 000 students receiving educational tours or staff presentations in classrooms. FY 73-Shipping, installation of exhibitions referenced above. FY 74-Assemble and install major loan exhibits and several smaller shows using for the first time special exhibition space added in FY 73 (almost doubling the temporary exhibition areas). Increase educational effectiveness of all installations by employing advanced audio-visual techniques.

NATIONAL PORTRAIT GALLERY

1972 Actual. . . .	\$ 924,000
1973 Estimate. . .	\$1,052,000
1974 Estimate. . .	\$1,418,000

The National Portrait Gallery is the only national museum of American history whose task is to tell the history of this nation primarily in terms of the men and women who made that history. The portraits of these men and women are crucial documents of historical evidence and bear strong witness to their roles in the American experience.

The Gallery's activities include: (1) the expansion and care of the collections; (2) public education through the exhibition of the permanent collection and specially organized temporary exhibitions for school and adult groups as well as the general public; (3) the research, writing, publication, and national distribution of scholarly and popular publications related to these exhibitions; and (4) the compilation of a definitive Catalog of American Portraits, a comprehensive data bank constituting a unique national information service in the areas of American history and biography, art, and iconography.

A program increase of \$346,000 is required to augment the acquisitions fund and for conservation and photographic support; to expand the research capabilities leading to exhibitions slated for space added in FY 1973 and related publications and to expand exhibits capabilities to utilize additional space as well as to increase the educational effectiveness of installations through full application of audio visual materials. An additional \$20,000 is requested for necessary pay for current staff.

Expansion and Care of Collections (2 positions; \$207,000)

This program includes activities resulting in acquisitions--the location, authentication, and preparation of art historical data on portraits for the permanent collection--and the conservation, photography, record keeping, shipping, and storage of such portraits, as well as those borrowed for special exhibitions or for study.

During the seven years since the NPG began building its collection, only about 600 portraits have been acquired. Although the Gallery has had considerable success in acquiring portraits by gift (37 valued at nearly \$175,000 were added in FY 1972), the rapidly accelerating interest in American art means that the NPG must be able to purchase portraits which it uncovers, or which are offered to it, or other institutions and private collectors will remove them from the market. Many such portraits are the only extant representations of the persons they depict. An additional \$170,000 is requested in FY 1974 to bring the total acquisition fund to \$300,000.

Many of the portraits acquired by the Gallery require considerable restoration before they can be exhibited. In order to reduce the long time which now often exists between acquisition and exhibition, an additional conservator of paintings is required. A photo indicating results of a restoration project requiring several weeks of one professional's time is included. The conservation lab requires additional funds for the increased costs of routine materials such as film for photographic documentation, chemicals, and wooden stretchers. Funds are also needed for film, paper, and chemicals for black and white and color photography for slides and other reproductions increasingly needed for educational programs and by researchers to illustrate publications (\$18,000).

Using the National Collection of Fine Arts frame shop facilities, the Gallery's cabinetmakers can fabricate and repair frames of portraits at a considerable saving over the costs of contracting for such work. Funds for supplies are needed (\$4,000).

An assistant curator is needed to build a definitive collection of portrait graphics (adding to the present holdings of 30,000 prints) for iconographic study and public exhibition. He will research other portrait print collections, public and private, with a view towards acquiring prints by purchase, exchange, or gift. Such prints help identify the otherwise unknown subjects of paintings and sculptures. In other instances, they are the only known likenesses of a particular individual (\$15,000).

Research, Publications, and Training (1 position; \$38,000)

This activity includes the research for and writing of publications related to special exhibitions and the permanent collection by the history department. The attached photo shows examples of such educational materials normally accompanying exhibitions. Also included is the library, a major reference facility for Gallery researchers and outside scholars.

Following the completion of the alterations on the third floor of the Gallery and the air conditioning of the Seventh Street first floor wing, exhibition space will increase by 8,000 square feet, nearly doubling the capacity for special exhibitions. Effective use of this area will depend largely on the history department's ability to prepare exhibition scripts. A second research assistant is required to support the two full-time historians. The Gallery also needs to supplement the history department staff from time to time with researchers hired on short term contracts working in collections outside Washington on special topics (\$18,000).

Increased demand for library materials on American history, biography, and portraiture by staff and visitors, as well as the higher costs of books and basic reference tools in microfilm and microfiche, make it necessary to raise the base for library purchases from \$10,000, the figure established when the Gallery opened, to \$20,000 in 1974. An amount of \$2,000 can be added in FY 1973 and an additional \$8,000 is requested in FY 1974.

The stock of several Gallery educational publications issued in previous years has been depleted, but classroom demand continues, especially as the knowledge of these publications reaches teachers outside of Washington. An amount of \$12,000 is needed to purchase reprints and to publish catalogs, monographs, and interpretive materials related to exhibitions to be held in the new building areas.

Public Education: Exhibits Production and Interpretation (1 position; \$101,000)

This category includes the assembly, installation, and maintenance of exhibitions. It also includes instruction for both adults and young people on American historical portraiture and biography through special programs featuring interpretative materials, talks, and classes conducted in the Gallery and, for the younger audience, in the schools as well.

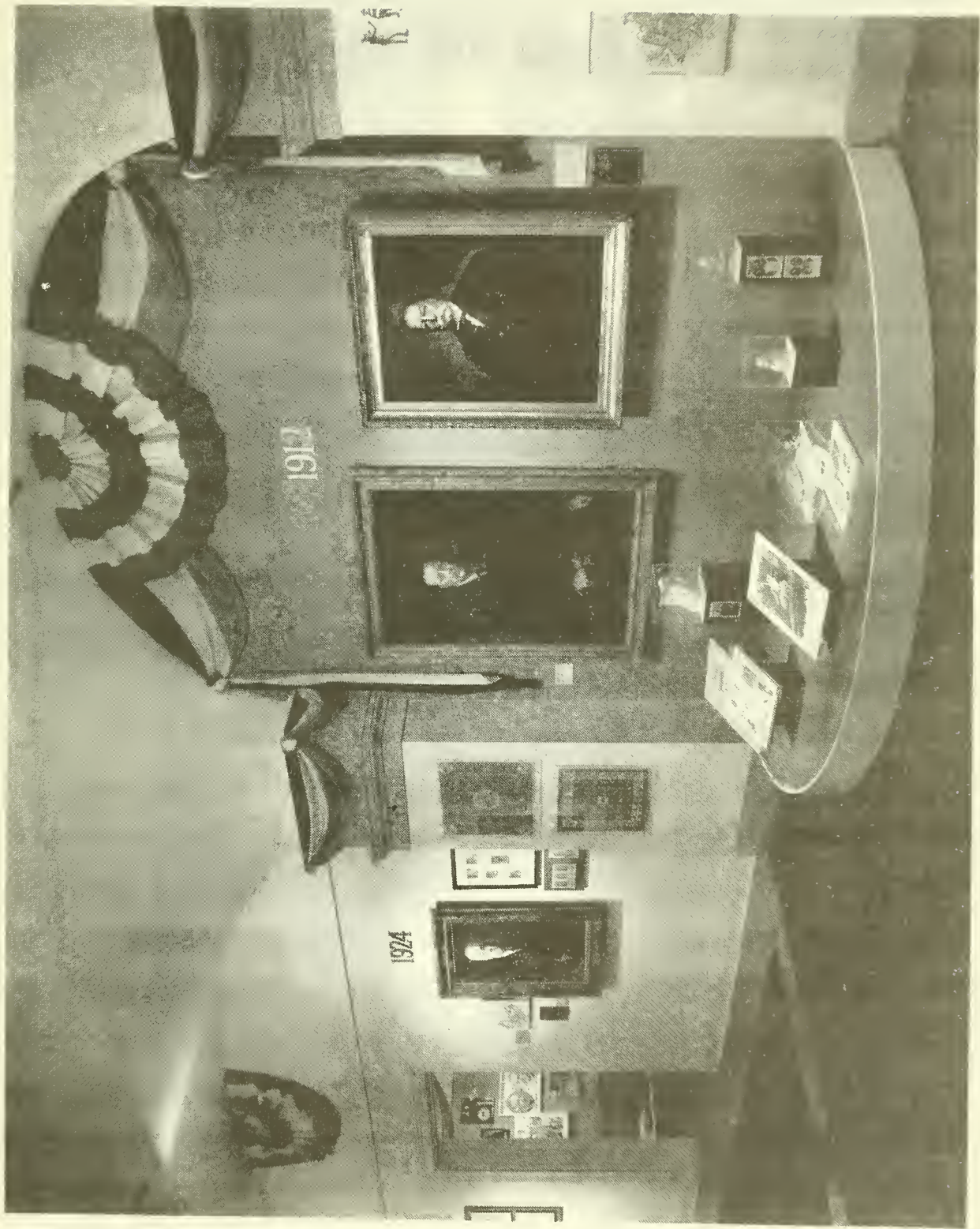
Effective year-round use can be made of the new areas for loan exhibitions and if the permanent exhibits resources are supplemented with funds for temporary exhibits personnel, outside contracting of exhibits production services, and additional exhibits supplies.

Temporary personnel are required to assist four production staff members in the hanging of portraits and the extremely time consuming work of arranging memorabilia and associative objects (of which there were almost 600 in the "If Elected..." exhibit) in special display units. A photograph showing the installation of the "If Elected..." show has been provided. Three or four times a year, during the installation phase of an exhibit the Gallery needs part time exhibits aides to perform this work for varying lengths of time. Help is not always available from the Office of Exhibits because of conflicts with other exhibits installation work elsewhere in the Institution. In addition, temporary personnel are required on weekends to run projectors, direct the public, and distribute self guiding recorded tour tapes. The Gallery does not have funds to provide such essential staff on weekends and holidays when the largest attendance occurs (\$21,000).

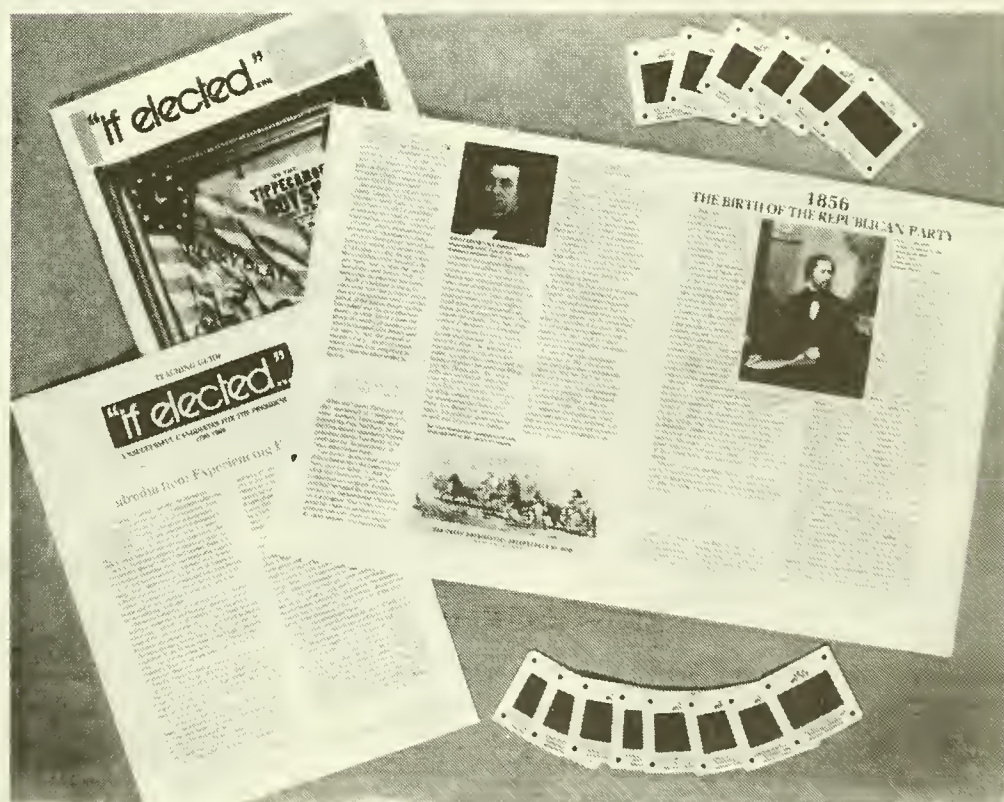
Funds for shipping borrowed objects to be used in new exhibition areas need to be expanded by one third (\$10,000). Funds for insurance also are required in the same proportion to the present base. (\$2,000).

Funds are needed to contract for the production of pedestals and special display units and the construction of temporary partitions in and the painting of exhibit areas (\$25,000). This work is not only time consuming, but also involves production space beyond the capacity of the shops. Additional supplies, especially wood, plexiglass, labeling materials, and lighting equipment will be required to install exhibitions in the new area (\$10,000).

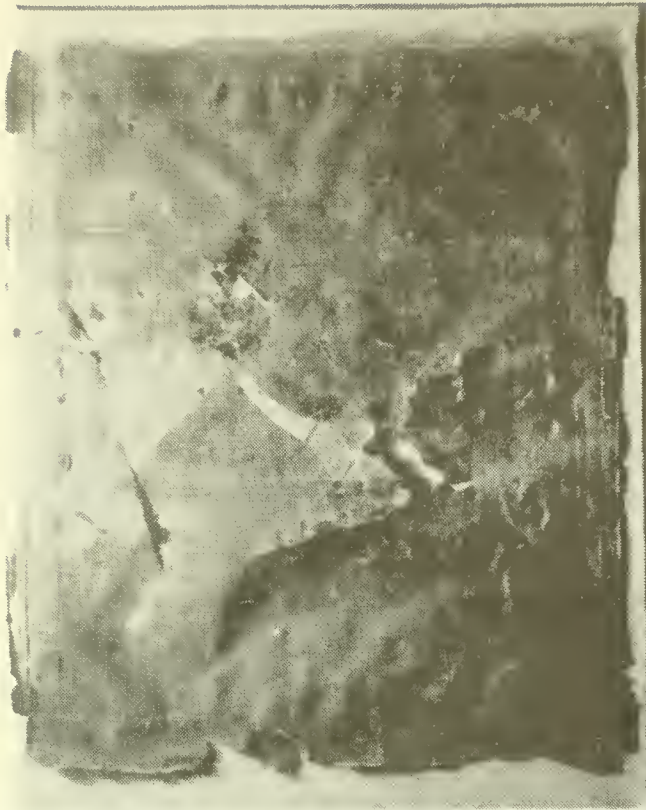
A position for a media specialist and support funds are requested to help the Gallery achieve the goal set in 1968 by the Secretary "... to



National Portrait Gallery exhibits contain many associative objects requiring special mounting, as shown in this view of a portion of the installation of "If Elected..." Unsuccessful Candidates for the Presidency 1796-1968.



All Gallery exhibitions are accompanied by major monographs such as this 512-page study and a variety of educational publications, teaching guides, and slide sets.



Various stages in the restoration of this long lost Rembrandt Peale portrait of Absalom Jones, one of the most important religious leaders of the early 19th century.

explore all possible means of educating the visiting public in experiencing the personages that are to be portrayed in a total environment of accessories of every sort, including films, filmstrips, tapes, and objects designed to reproduce in kinetic fashion the lost atmosphere of the personality, to quicken the senses and thus to teach, objectively and without didacticism, some of the meaning of the times and of the world in which the personages lived." The media specialist will advise the exhibit and education staffs on the application of audiovisual devices and effects to realize the above objectives. He will keep the Gallery abreast of new techniques and will develop a collection of recordings and films of prominent Americans for use in education and exhibit programs of the Gallery (\$22,000).

Building guides both to orient visitors to the permanent collection and special exhibitions and to describe resources to prospective audiences must constantly be revised and reprinted (\$11,000).

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Current museum operations <u>1/</u>	15	\$255,000	17	\$433,000	26	\$494,000
Planning, research and curation <u>2/</u>	6	109,000	6	123,000	16	306,000
Conservation and restoration <u>3/</u>		102,000		10,000		
Furnishing and equipping museum <u>4/</u>	—	<u>160,000</u>	—	<u>600,000</u>	—	<u>600,000</u>
Total operations	21	\$626,000	23	\$1,166,000	42	\$1,400,000

1/ Includes various museum programs such as research of the permanent collection; establishing an inventory of the collection; conducting an active loan program (82 paintings and sculptures to 49 museums and galleries) and visitor program (33 tours with 2,415 visitors); answering requests for photographs (125 processed in FY 1972), and research inquiries (170 answered in FY 1972). Library contains over 6,000 items in process of being catalog and a procedure for data collection is being implemented to place the permanent collections on the computer. A registrar activity has been organized for maintaining and protecting the collection; receiving and shipping items on loan; and preparing the collection for transfer to Washington, D.C. In FY 1974, in addition to the continuing activities, a comprehensive education program will be developed and implemented to coincide with the opening of the museum to the public in the spring of 1974. The education program will include arranging for study facilities for visiting scholars and students studying specific works in the collection..

2/ In FY 1972, research for the opening exhibition catalog was begun, with an end objective of a 750 page catalog with 1,000 photographs, biographies, and commentaries. The manuscript was completed in FY 1973. Extensive plans for installation of the inaugural exhibition were begun, with various scale models of the galleries and the sculpture garden being utilized to facilitate final installations. In FY 1974, initial work will be done in preparing appropriate publications for the museum, developing a comprehensive tour program, scheduling auditorium activities, such as films, and planning programs of special interest to the Washington community.

3/ Necessary conservation and restoration of major works of art to be exhibited in the inaugural show were completed in FY 1972. The amount of \$10,000 in FY 1973 will provide for any remaining works of art requiring minimal restoration or conservation.

4/ Requirements reflected for furnishing and equipping the museum are one-time non-recurring costs. In FY 1972 a partial order of storage display screens was funded by using funds which became available by deferring hiring of personnel because of slippage in museum construction completion date. As a consequence, requirements for essential items and installations have been reduced to \$600,000 in FY 1973 and \$600,000 in FY 1974.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

1972 Actual.....	\$ 626,000
1973 Estimate.....	\$1,166,000
1974 Estimate.....	\$1,400,000

The Hirshhorn Museum and Sculpture Garden, now under construction on the Mall, will house a magnificent gift to the nation of outstanding modern paintings and sculpture. The renowned sculptures in the collection range historically from antiquity to the present. The depth of the representation of major sculptors of the nineteenth and twentieth centuries is unique. The paintings in the collection are primarily twentieth century. Beginning with such precursors as Thomas Eakins and Winslow Homer, the course of modern American painting is extensively covered. Complementing the American section is a strong group of significant European paintings of the past three decades. For museum officials, scholars, students, and publishers, the Hirshhorn Museum collection continues to be a major source of documentation in the field of modern art.

The Act of November 7, 1966, authorized construction of the Museum and designated the Mall site. Building construction began in March 1970 and the estimated completion is June 1973. All phases of the work are presently geared to prepare for the opening of the Museum by the spring of 1974. See figure 1 for the schedule of major activities.

The requested program increase of \$230,000 represents the overall requirement for the addition of necessary staff and providing for other expenditures related to occupying the completed building and scheduling the opening exhibition in FY 1974. An additional amount of \$4,000 is sought for necessary pay for the current staff.

Preparing for the Opening and Operating of the Museum (19 positions; \$230,000)

The operating staff of the Hirshhorn Museum and Sculpture Garden must be expanded in FY 1974 to provide the professional and curatorial support needed to organize and activate a major Museum. Additional staff will be required to conduct a full and balanced program of exhibitions, educational activities, research and curation, and technical support.

The budget plans for FY 1973 had contemplated a staffing increase from 21 to about 35 positions to be funded in part by the savings resulting from the planned reduction of expenditures for conservation and restoration of the collections. In view of the delay in the completion and occupancy of the building, the FY 1973 staffing level will be held to about 23 positions with an accelerated build-up in FY 1974 to coincide with the completion of the building and the scheduled opening exhibition date of May 1974. Savings resulting from this action have been applied to obtaining essential furnishings and equipment for the building interior thus reducing the level of additional new funds required for this purpose (see following section).

The requested 19 additional personnel in the 1974 budget are primarily technical and support staff including museum specialists, technicians and aides, clerical personnel, and personnel to staff conservation and framing shops. Also included are professional level personnel to supervise the exhibits and educational programs (\$208,000).

Funds are in the budget request for other contractual service costs related to the collections, photography to document the collections for exhibits and research purposes, and supplies and materials to operate the new Museum. Funds have also been included in this request for transportation and movement of household goods of personnel transferring with the collection to Washington, D.C., as well as for essential professional travel of senior administrative and curatorial personnel (\$22,000).

Furnishing and Equipping the Museum and Sculpture Garden

Construction funding of \$16,000,000 (\$15,000,000 appropriated by Congress, and a \$1,000,000 gift by Mr. Hirshhorn) will provide a basic museum building, including necessary utility equipment, i.e. heating, air conditioning, etc. However, this amount does not permit the museum to be outfitted to the degree necessary for public exhibitions and museum programs. It does not provide storage facilities for the collection nor furnishings and equipment for exhibit and other public areas, or office and laboratory furniture and equipment. The FY 1973 budget request identified a non-recurring requirement for about \$1,400,000 for these purposes. Savings in the base as a result of the decline in expenditures for conservation and restoration of the collection enabled the Museum to purchase about \$160,000 of storage screens in FY 1972. The FY 1973 appropriation of \$500,000 specifically for equipment and furnishings, combined with continued personnel cost savings in the base, will permit the Museum to purchase an additional \$600,000 of these items in the current year (including the remainder of the storage screens). The balance of the furnishings and equipment will be purchased in FY 1974. No increase in appropriations will be required for this purpose.

The FY 1974 funds will be used for furnishings and equipment for exhibit galleries and laboratory spaces (\$145,000); security systems and auditorium equipment (\$117,000); furniture for public areas (\$213,000); and other items such as tour guide systems (\$125,000).

Figure I
JOSEPH H. HIRSHHORN MUSEUM & SCULPTURE GARDEN
Schedule of Major Activities - FY 1972-1974

FY 1972		FY 1973				FY 1974		
1971 JULY	1972 JAN	1972 JULY	1972 AUG	1972 NOV	1973 JUNE	1973 JULY	1974 APR	1974 MAY
Building Construction								
Planning and Installation of Opening Exhibition								
Equipment - Furnishings for Interior.								
Catalog of Opening Exhibition - Manuscript to Publisher 8/1/72								
Inventory of Collection (Computerized)								
Research Permanent Collection								
Develop Education Program								

FREER GALLERY OF ART

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Building operations <u>1/</u>	2	\$32,000	3	\$ 44,000	3	\$ 50,000
Conservation and research <u>2/</u>			6	66,000	6	160,000
Maintenance and exhibition <u>3/</u>	1	25,000	1	39,000	1	16,000
Reference collections <u>4/</u>	<u>1</u>	<u>21,000</u>	<u>3</u>	<u>37,000</u>	<u>5</u>	<u>66,000</u>
Total operations	4	\$78,000	13	\$186,000	15	\$292,000

1/ In FY 1973 an increase of federal funding--the first step in a planned series of three--enables the Gallery to replace obsolete equipment and purchase new materials and supplies for the care and maintenance of the collections and building. The Gallery has begun an extensive program of exhibitions, publications, and symposiums to celebrate its 50th anniversary. The Jubilee Year formally begins on May 2, 1973, and will continue until May 1, 1974.

2/ The conservation laboratories of the Gallery in FY 1972 further expanded their services to students, scholars, and museums on an international basis. No other museum outside the Far East has comparable specialists and facilities. In FY 1973 a new x-ray room will be completed and initial x-ray equipment will be installed so as to enable the conservators to speed up their analysis of objects in the collection and those submitted for study or purchase. Additional equipment that will clean objects ultrasonically and a non-dispersive x-ray analyzer, which will make it possible to sample objects without physically removing a sample, will be acquired in FY 1974.

3/ Plans already underway in FY 1972 for the preparation of new exhibitions necessary for the Jubilee Year activities, and expansion of storage facilities to cope with a steadily growing collection, will be continued in FY 1973. Both the exhibition galleries and the storage areas continue to serve increasing numbers of visitors, students and specialists. It is estimated that the number of visitors will increase substantially during the Jubilee Year. In FY 1974 work on improving storage areas will continue so as to care for the unique objects in the collection and make them readily available to the public.

4/ During FY 1972, FY 1973, and FY 1974 cultural exchange between the United States and the countries of the Far East continues to expand. The resumption of travel to the People's Republic of China, within the past few months, has resulted in an extraordinary reawakening of interest in Chinese culture. At the same time, the publication of specialized publications relating the Chinese cultural history in Chinese and Japanese languages has increased. Consequently, the staff and facilities of the Gallery are providing more information and services than ever before.

FREER GALLERY OF ART

1972 Actual.....\$ 78,000
1973 Estimate.....\$186,000
1974 Estimate.....\$292,000

The Freer Gallery of Art houses one of the world's most distinguished collections of Oriental art. Including over 10,000 works of art from China, Japan, Korea, India, and the Near East, the collection covers paintings, sculptures, and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold, and silver. Items not currently on exhibition and the library of 40,000 volumes are available and used extensively by the Gallery's staff and numerous visiting scholars and students. The two-fold program envisaged by the founder involves the continuing search for works of the highest quality that may be added to the collections and the continuing study of these works of art as keys to understanding the civilizations that produced them.

A program fund increase of \$100,000 is in the FY 1974 budget request. An additional \$6,000 is sought for necessary pay.

In the current year a major effort has been made to improve the level of federal funding for the Freer Gallery of Art as well as private income. Fortunately, through new investment policies and federal action, the first step of a three-year program to remedy funding shortages has begun. The request for FY 1974 will mark the second step and should further assist the Gallery in carrying forth programs of scholarly research as well as of public education. Major objectives of a phased growth in the Freer's federal budget are: to meet the terms of the Deed of Gift which provided that maintenance of the collection would be provided by the Smithsonian; to free private funds for the acquisition of art in the face of steadily rising prices (only about \$185,000 are available in FY 1973; at least twice this amount should be available to respond to purchase opportunities); and to rebuild the private fund balance which has been reduced to a dangerously low level (about \$120,000 at the close of FY 1972).

Conservation and Research (\$71,000)

Additional funding in the amount of \$71,000 is requested to add part-time employees (\$18,000) and to acquire major items of conservation and research equipment (\$53,000).

A chemist is essential to the operation of the Technical Laboratory in order to assist in the repair and cleaning of objects in the collection and the preparation of them for exhibition as well as the analysis of the materials from which they are made so that man may better understand the great civilizations of the past and gain insight into materials and techniques of value to our future. A complete chemical quantitative analysis of metal objects in the collection, amounting to several thousand objects, is underway.

Two research assistants are required. One will work with Far and Near Eastern ceramics to curate the collection of some 2,400 objects and some 6,000 shards. Within the past ten years the holdings of shard materials, which are vital to ceramic cataloging and research, have increased ten-fold and will continue to grow. The research assistant will locate materials, make them available to the public and scholars, and answer inquiries. The other research assistant will work on the Whistler graphics and assist in the conservation of

other objects within the collection as well as the preservation of archival documents. The Gallery has what is considered to be one of the largest collections of Whistler graphics in the world consisting of some 1,100 items. They are badly in need of care, including cleaning, rehinging, and remounting.

The requested additional equipment funds will permit the Gallery to purchase the following items: X-ray diffraction cameras, orthoplan microscope and accessories, electronic desk calculator, a nondispersive X-ray analyzer, and an ultrasonic cleaner.

Reference Collections (2 positions; \$29,000)

A translator is required to assist in the routine preparation of catalog entries for objects in the collection, to assist visitors to the library and the collections, and to answer public inquiries. The librarian requires an assistant because of the greatly expanded use of the Freer's research facilities.

ARCHIVES OF AMERICAN ART

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Acquisitions, research, and reference <u>1/</u>	5	\$102,000	6	\$100,000	7	\$128,000
Manuscript processing and preservation <u>2/</u>	4	91,000	4	90,000	5	110,000
Oral history <u>3/</u>	—	—	—	—	—	5,000
Total operations	9	\$193,000	10	\$190,000	12	\$243,000

1/ During FY 1972 responded to 790 letters requesting information and research information; over 1000 researchers and other visitors used the Archives collections; lent 231 rolls of microfilm; processed 170 tape recordings; and acquired 70 new collections including the papers of the Corcoran Gallery (Washington), the Society of Arts and Crafts (Boston), Joseph Stella, Philip Evergood, Karl Knaths, Chester and Mary Dale, and Thomas Anshutz.

2/ Processed over 200 rolls of film during FY 1972 representing about 150,000 archival items; processed 80,000 photographs, including the Ivan Dmitri collection "Photography and the Fine Arts."

3/ Funded largely with private and grant funds, the collection of taped interviews numbers about 1200.

ARCHIVES OF AMERICAN ART

1972 Actual	\$193,000
1973 Estimate	\$190,000
1974 Estimate	\$243,000

The Archives of American Art is committed to aiding research and scholarship in the history of the visual arts in this country from prior to the Revolutionary War period to the present time. It acquires, organizes, and preserves the primary documentation needed by historians--the correspondence, diaries, business papers, and photographs of painters, sculptors, critics, dealers, and collectors, and the formal records of galleries, museums, and art societies. These collections of paper are cataloged, microfilmed, and made available to scholars.

The processing and chief reference center of the Archives is located in space provided by the National Collection of Fine Arts and the National Portrait Gallery library. Added to the library, and to the archival material already possessed by these two museums, the Archives makes this building the major center for the study of American Art. In order to make its holdings accessible to scholars throughout the country and to develop a systematic collecting program, regional centers are currently maintained in Boston, New York, and Detroit.

The organization anticipates income from private funds of about \$135,000 in FY 1973. This income is used to support Archives' activities, such as quarterly publication and distribution of the Archives' Journal, and specialized acquisitions. It supplements on a matching basis activities supported by federal appropriations such as cataloging, information retrieval, and reference services.

An increase of \$50,000 would be used to establish a regional office in San Francisco, California, to employ an additional archives technician in the Boston office and to handle increased workload of collections filming. Funding of \$3,000 is requested for necessary pay.

Establishment of San Francisco Office (1 position; \$25,000)

FY 1971 was the Archives of American Art's first year as a bureau of the Smithsonian Institution. It has become an integral part of the Smithsonian's research facilities and its resources are being intensively used by staff and fellows of the National Collection of Fine arts, the National Portrait Gallery, the National Gallery of Art, faculty and graduate students across the country, and by scholars from such places as Chicago, London, Munich, New Orleans, New York, Paris, Seattle, San Francisco, Stockholm, and Tokyo. Significant additional collections of papers have been received.

Regional offices are the chief means of locating, attracting, and acquiring collections of artists' and dealers' personal papers. The additional position requested is for a west coast area director to man the Archives branch office in rent-free quarters in the DeYoung Museum in San Francisco. Private funds will subsidize additional staff in this office. This branch of the Archives will make available to west coast researchers in American art and American history the full resources of the Archives' collections, three million items on microfilm (continually being added to), five million original items, taped interviews, and photographs. It will provide a wealth of primary sources information to the many universities and research centers on the west coast.

Funding of \$25,000 is needed for director's salary and for necessary office equipment including supplies, utilities and contractual services for micro-filming.

The DeYoung Museum and the academic community are eagerly awaiting the opening of this branch on a full-time basis. The large number of artists in the west coast area warrants a full scale collecting program.

Management Processing & Preservation (1 position; \$20,000)

The additional archives technician will be employed in the Boston office to assist in the microfilming and cataloging of three large collections in the Boston area. Support costs for this position include purchase of a microfilm camera and film rather than use contractual services at a much higher rate. Additional office supplies and other office equipment will be necessary for this position.

Oral History (\$5,000)

The Archives of American Art's oral history program began in 1959 and has since become a major activity. Tapes made independently by interviewers pursuing their own projects have been given to supplement the Archives own efforts. At the present time, the oral history collection comprises more than twelve hundred transcripts. This program has been funded primarily through grants from the art community and in recent times from private sources of the Archives. The requested \$5,000 would be used primarily for the temporary appointment of a transcriber and typist to the federal rolls. The opening of the west coast office will make available areas that have not been previously at our disposal.

NATIONAL ARMED FORCES MUSEUM ADVISORY BOARD

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Outdoor bicentennial museum and other planning and related preservation of collections <u>1/</u>	6	\$131,000	6	\$134,000	6	\$136,000

1/ Includes primarily planning for an Outdoor Bicentennial Museum and for the establishment within the Institution of the Dwight D. Eisenhower Institute for Historical Research.

NATIONAL ARMED FORCES MUSEUM ADVISORY BOARD

1972 Actual.....\$131,000
1973 Estimate.....\$134,000
1974 Estimate.....\$136,000

The National Armed Forces Museum Advisory Board, established by Public Law 87-186 (approved August 30, 1961), advises and assists the Board of Regents of the Smithsonian Institution on matters relating to establishment of a National Historical Museum Park, to be known as the Outdoor Bicentennial Museum and a study center to be designated the Dwight D. Eisenhower Institute for Historical Research.

No program fund increase is requested for FY 1974. Planning for the Outdoor Bicentennial Museum will be continued. Funds for the development of the Eisenhower Institute are being requested by the National Museum of History and Technology. An amount of \$2,000 is required for necessary pay.

SMITHSONIAN ARCHIVES

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Identify and preserve <u>1/</u>	1	\$22,000	1	\$24,000	2	\$39,000
Process archives <u>2/</u>	3	36,000	4	45,000	5	55,000
Microfilm program <u>3/</u>		7,000	1	18,000	1	18,000
Automated finding aids <u>4/</u>						3,000
Care for recent records <u>5/</u>					1	16,000
Reference and research <u>6/</u>	<u>1</u>	<u>16,000</u>	<u>1</u>	<u>20,000</u>	<u>1</u>	<u>20,000</u>
Total operations	5	\$81,000	7	\$107,000	10	\$151,000

1/ In FY 1972 the Archives began its program in the National Museum of Natural History (NMNH), an invaluable source of documentation for the history of the natural sciences. In FY 1973 preliminary work is beginning in the National Museum of History and Technology (NMHT). In FY 1974 the Archives will prepare a guide to documentary resources of the NMNH.

2/ In FY 1972 the Archives published the first Guide to the Smithsonian Archives. Processing procedures were developed. In FY 1973 over 300 cubic feet will be processed. In FY 1974 much more processing will be done in NMNH and NMHT.

3/ In FY 1972 the Archives microfilmed about 15,000 exposures. In FY 1973 this production will be increased to several hundred thousand exposures. In FY 1974 the Archives plans to begin providing copies of valuable Smithsonian archives to several universities throughout the country.

4/ Planning for computer use beginning in FY 1972 and continuing in FY 1973, will result in practical application in FY 1974.

5/ Archives can be much more effectively preserved if current records are properly maintained. The Archives informally gives assistance in this matter in FY 1972 and FY 1973, plans to expand the activity in FY 1974.

6/ The ultimate purpose of the Archives program is to utilize the archival resources of the Smithsonian. Reference use has grown about 15 percent per year. In FY 1972 and FY 1973, articles appeared based on the Smithsonian Archives, and a project for publication of some archives was begun. Increased reference work for FY 1974 will be accomplished by existing staff.

SMITHSONIAN ARCHIVES

1972 Actual.....\$ 81,000
1973 Estimate.....\$107,000
1974 Estimate.....\$151,000

The Smithsonian Archives is the official memory of the Institution and a valuable research resource for scholars working in the history of American science and in the history of the cultural institutions which are under Smithsonian care. Exclusive of materials located in the research and curatorial areas, which total millions of documents, the Archives' current holdings amount to over one million documents from the 1830's to the present. Within currently limited resources, the Archives' staff identifies permanently valuable records throughout the Institution, preserves them for administrative, legal, and fiscal value, and provides service on these records to staff and to the scholarly community.

The program plan for FY 1974 undertakes to improve the Archives capabilities to identify, preserve, and make available those documents which the Smithsonian holds throughout its many divisions. Emphasis will also be given to the care of current documents in preparation for their transfer to the Archives. Past staffing was barely adequate for archives on hand in the central Archives, and the documents in most divisions could not be given professional care by either the divisions or by the central Archives. To accomplish this plan a program increase of \$43,000 is requested. An amount of \$1,000 is required for necessary pay.

Identify and Catalog Documentary Collections throughout the Smithsonian (2 positions; \$26,000)

The Smithsonian maintains archival collections in the central Archives and in its museums. Decentralization is often necessary because archives document objects and specimens. The Archives staff brings these documentary resources together, either physically or intellectually. Development of these documentary resources for the widest scholarly research is the purpose of this request.

Present cataloging capabilities of the Archives is about 300 cubic feet per year. This should be trebled in order to make progress with the backlog of archives accumulated over the past 125 years.

One additional archivist and one additional archives technician (\$24,000) and \$2,000 support is requested to meet this goal. The work will involve searching out and cataloging valuable records and further developing a unified system of information about archives throughout the Institution.

Care for Current Documentation (1 position; \$17,000)

Documents which become priceless historical objects begin as current papers. If current papers are not maintained properly, the Archives devotes its limited resources to correcting mistakes--or worst of all, invaluable documents are lost. Moreover, the Institution's resources are expended to maintain documents which have no archival or legal value.

The Archives requests one position (\$16,000) and support (\$1,000) for an archivist for current records. This person will work with offices throughout the Institution to ensure that officials and other professional staff receive the assistance they need to select current documents for permanent preservation.

ASSISTANT SECRETARY FOR PUBLIC SERVICE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration <u>1/</u>	5	\$144,000	4	\$ 90,000	5	\$ 98,000
Special projects <u>2/</u>	1	3,000	1	16,000	2	45,000
Center operations <u>3/</u>	—	—	—	—	3	40,000
Total operations	6	\$147,000	5	\$106,000	10	\$183,000

1/ This represents the amount necessary for personnel to oversee and coordinate the nine divisions conducting public service programs, advise the Secretary on policy questions, develop plans and programs, and evaluate the performance of Smithsonian bureaus in public service.

2/ In addition to administrative functions, the Assistant Secretary for Public Service guides the development and maintenance of a central mailing list of Public Service units and Smithsonian bureaus. And a Free Film Theater is sponsored by the Assistant Secretary for Public Service for visitors, school children, and the Washington community.

This fiscal year we have designated funds for the Institution's educational objectives in film making and network television. Related studies of cable television and associated applications of new communications technology will be undertaken to prepare the Smithsonian to play a responsible national role in open education. To lead this study of planning, the Assistant Secretary for Public Service requests a Video Program Coordinator.

3/ This represents the level of effort needed to operate the Center 364 days a year which includes; recruitment, training and maintenance of over 100 volunteers who act as information specialists in the major museums on the Mall; development of informational reference materials; processing of the mail inquiries; maintenance of the Institution's Central Information telephone lines; independent placement of volunteers as staff assistants throughout the Institution and development of foreign language informational services.

ASSISTANT SECRETARY FOR PUBLIC SERVICE

1972 Actual.....\$147,000
1973 Estimate.....\$106,000
1974 Estimate.....\$183,000

The position of the Assistant Secretary for Public Service was established in 1968 to identify and consolidate those organizations which comprise the Institution's popular educational, extension and information services. These units include: Anacostia Neighborhood Museum, Division of Performing Arts, Office of Elementary and Secondary Education, Office of International Activities, Office of Public Affairs, Reading is Fundamental, the Smithsonian Associates, the Smithsonian Press, and the Smithsonian Magazine.

The Assistant Secretary for Public Service guides and supports the directors of Public Service units in the development of programs which advance the Institution's objectives in education and information, reaching beyond museum exhibition. A program increase of \$74,000 is requested for this office. Necessary pay in the amount of \$3,000 is also sought.

The Institution continues experiments in community or neighborhood museum support as a service to offer major museums seeking to serve broader social and economic publics and as a self-correcting device intended to influence the exhibition and other programs offered by Smithsonian bureaus. Educational services to schools, performances on the Mall, activities for Smithsonian associates, and a widening range of publications and information about Smithsonian collections, research, expedition, and scholarship--all of these undertakings reinforce one another. They are intended, by one means or another, to reveal and make increasingly accessible the Smithsonian's resources for the pursuit of individual curiosity and enlightenment. As these programs are based on Smithsonian collections and exhibitions, seen by millions of citizens, they aim to make Smithsonian resources useful to the national public many of whom may visit out museums infrequently. An additional position is requested to handle the heavy amount of clerical duties (\$7,000).

In Public Service program development and policy analysis, the Assistant Secretary and his staff conduct frequent studies. The results of these studies supply the Secretary and the Executive Committee the material for decision making.

Some examples of cooperation among the Public Service units and Smithsonian bureaus are:

--the annual Festival of American Folklife. Several offices such as the Office of Anthropology, the Division of Musical Instruments, the Division of Ethnic and Western Cultural History to name but a few, contribute to the planning of the Festival and participate in the workshops that are held for Festival participants and the public.

--the Docent Program. The Office of Elementary and Secondary Education provides Staff Associates who prepare scripts for the trained volunteers to meet many of the museums' needs for educational programs for school children, and organized tours for the visiting public.

--Smithsonian Associates programs. Classes, workshops, lectures and field trips offered to Smithsonian Associates are given by curators and Smithsonian staff members. Many programs are designed to supplement museum exhibitions and augment the educational objectives of Smithsonian bureaus.

--Anacostia Neighborhood Museum. The Anacostia staff consults with associates staff on joint programs, scholarships for underprivileged children, and educational services to other parts of Washington, D.C.

--The Smithsonian Press and the Office of Public Affairs. Pamphlets, books on all parts of the Smithsonian collections and subjects of study, and study guides to the museums are badly needed. The Office of Public Affairs and curatorial offices know the range of questions asked by visitors and lay readers. A concerted effort has begun to provide more publications supplementing and interpreting the museums' holdings.

Special Projects:

Mailing List Program. The Mailing List specialist reviews and evaluates the mailing lists used by the Institution in various capacities in order to systematize the procedures of several divisions, and centralize the list data on computers. Since this position serves many needs of the Institution, it was thought that it would be more accessible if it were centrally located within the Office of Public Service.

The Free Film Theater is sponsored by the volunteer Women's Committee and is offered as a mid-day program in the Museum of Natural History auditorium to schools, museum visitors and employees, and the Washington community. A small amount of program money (\$2,000) is requested for rental of educational films for this popular public service.

Video Program Coordinator (\$25,000). The Smithsonian Institution is concerned with the diffusion of knowledge covering diverse academic disciplines. It is vital that modern communications technology be used for the extension of educational services based on Smithsonian research and scholarship. The Video Program Coordinator would be assigned the task of establishing a pilot level extension program using new approaches in the communications media to reach school children throughout the nation and to work with external organizations in the development of programs that would carry the resources of the Smithsonian to people who could not normally come to the Institution themselves.

Smithsonian Institution Information Center (\$40,000). The Information Center was established in January of 1970 under the auspices of the Smithsonian Associates. It is the objective of the Center to provide information and general assistance to visitors to the Smithsonian via telephone, mail and the Center's information volunteers located at satellite points throughout the museum complex.

The growth of this operation, in terms of the quality and quantity of services offered and the time and effort required to appropriately administer a program primarily public service oriented, prompts the request for federal funding in 1974.

Operating 364 days a year, the Center provides assistance of some nature to approximately 70 percent of all visitors to the Smithsonian.

Over 100 volunteers, acting as the Smithsonian's special emissaries of good will, have been recruited and trained to staff information desks in all of the major museums on the Mall and as staff assistants in the Center, contributing over 14,000 hours of service a year.

Training of these individuals is of a self-paced nature aimed not at teaching the answers to all the questions that will be encountered, but toward developing the ability of volunteers to expeditiously find the answers. A program of continuing education has also been devised to keep the volunteers up to date.

Mail inquiries requesting anything from information for visiting purposes to specific material requiring research on subjects from airplanes to zoology, calendar and congressional requests are also processed by the Center.

Acting as the Smithsonian's central telephone information office weekdays, and the only regularly staffed office on weekends, telephone traffic is climbing steadily and could easily amount to 50,000 calls in 1974.

In response to the many requests for volunteer assistance from curators and departments throughout the Smithsonian, the Center is attempting to act as a clearinghouse for what we term independent volunteer service. Through interviews, volunteers' educations, backgrounds and interests are matched with staff requests for assistance. These volunteers are performing such tasks as; setting up photo files, an inventory of rare books, coding Mayan hieroglyphics, etc.

Projected services to be developed and implemented through the Center include; translation services for foreign visitors and the development of more sophisticated informational materials.

Three additional positions (\$40,000) are requested to be converted from the private funds to federal positions. These will serve as the core staff to administer this program and to see to the development of additional volunteers. This is considered a vital staff to start to build up as the Bicentennial Year approaches when many more visitors are expected to the buildings on the Mall.

ANACOSTIA NEIGHBORHOOD MUSEUM

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration <u>1/</u>	4	\$104,000	4	\$120,000	4	\$123,000
Education <u>2/</u>	2	29,000	2	40,000	4	75,000
Research and exhibits <u>3/</u>	4	73,000	7	107,000	8	99,000
Exhibits training <u>4/</u>	—	—	—	—	<u>2</u>	<u>30,000</u>
Total operations	10	\$206,000	13	\$267,000	18	\$327,000

1/ Includes the planning and direction of all museum programs and contacts with foundations, government agencies, and private organizations interested in the neighborhood museum concept.

2/ Children's room opened in February, 1972, and its activities have attracted many adults and children. Activities in this area include: flannelboard presentations on black history, films and filmstrips, and demonstrations in butter, ice cream, taffy, soap, and candle making. Other activities include panel discussions, seminars, films, and live programs featuring the performing arts. The Young Peoples' Festival of the Arts now in its 5th year features elementary and secondary schools from the metropolitan area, Bowie State Teachers College Drama Department, and two groups from Lorton Reformatory, and the U.S. Navy Band. Some 10,000 children and adults come either to perform or to see the performances.

3/ Includes studies and resulting exhibits, funded largely by grants, on community history, problems, and potential. Opened the "Evolution of a Community (historical phase)" in FY 1972. In FY 1973 opened the second phase dealing with problems of the community: crime, drugs, unemployment, housing, and education. Also produced exhibitions on the black man in science and "Accent '71" highlighting various museum activities. Planning an exhibit on consumer fraud and an art show for the D.C. Art Association.

4/ Provides for training in exhibits design and production.

ANACOSTIA NEIGHBORHOOD MUSEUM

1972 Actual.....\$206,000
1973 Estimate.....\$267,000
1974 Estimate.....\$327,000

The Anacostia Neighborhood Museum was opened in 1967 to reach out to new audiences who are unaware of museum resources, physically too far from them, or, as inhabitants of low-income population density centers, do not see the interest or relevance of museums. Five years later, the Museum has entertained and instructed about 250,000 visitors and offers a wide array of classes and youth programs. Anacostia has linked its research, exhibit, and education activities directly to the needs of the community and has assured a fresh, nontraditional approach to the role of the museum.

The FY 1974 budget contains a request for an additional \$55,000 for museum research and education and for the exhibits training laboratory and \$5,000 for necessary pay for current staff.

Museum Research and Education (3 positions; \$25,000)

The Museum offers its own education programs for all age groups--pre-school to senior citizens and helps to plan school enrichment activities with area school teachers. The following photograph shows activity in the new childrens room. The mobile division continues to serve primarily Anacostia schools, but this past year an increasing number of requests were received from the greater Washington, D.C. area including schools from Virginia and Maryland.

The education program is reinforced by the research and exhibits programs which translate the history and problems of Anacostia and possible solutions to these problems into exhibits for the community and other communities with similar problems.

In order to bring varied and top quality exhibits to the Anacostia community and the larger Washington area, it will be necessary for the Museum to receive additional resources for its research and education functions. Three additional positions are requested at a cost of \$25,000. An exhibits specialist is needed to plan, design, and install new exhibits and to develop the video-tape program. A museum aide is required for the mobile unit. Currently there is but one person available to take the Museum's programs to schools in the Washington area. Finally, a clerk typist is essential to cope with the increasing clerical duties within the education department. Almost all of the clerical duties are now performed by the one full-time professional person.

Exhibits Training (2 positions; \$30,000)

In FY 1973 the Museum plans to establish an exhibits design and production laboratory using funds appropriated to the Smithsonian and anticipated foundation support. The primary objectives of the laboratory are

--To provide vocational training and placement for inner-city minority group young people so that they may pursue careers either in the American museum community or in related fields of private industry. Concerning the latter sector, the vocational potential of the proposed laboratory should prove almost unlimited since generic training in exhibits, which includes such skills as cabinetwork, carpentry, metalwork, spraypainting, silk-screening, model-making, and design, has high transferability to private industry.



Chief of the Anacostia education department with children in the newly opened children's room.

--To have minority group members themselves participate in the planning and realization of exhibits and related educational materials portraying their own contributions for the Bicentennial of the American Revolution. It is anticipated that the products of this laboratory would be in demand for traveling exhibits.

Smithsonian funds will be used to provide a small temporary building. It is anticipated that outside support will be used for salaries of training staff and other operating expenses. The agreement with the foundation will require that the Smithsonian begin to phase into meeting operating expenses in FY 1974. To meet this commitment two positions are requested with funds for supplies, services, and equipment (\$30,000). A job developer will assist the lab director in the development of the training program in the planning stage. He will be directly responsible for the development of the training curriculum. Working closely with the director, he will develop jobs for graduates of the training program in the museum community and in sectors of private industry. An administrative assistant is also necessary to manage detailed correspondence and accounts and handle correspondence.

OFFICE OF INTERNATIONAL ACTIVITIES

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Fostering and coordinating overseas programs <u>1/</u>	3	\$ 40,000	3	\$ 41,000	3	\$ 47,000
Administration of the foreign currency program <u>2/</u>	<u>6</u>	<u>100,000</u>	<u>6</u>	<u>114,000</u>	<u>8</u>	<u>154,000</u>
Total operations	9	\$140,000	9	\$155,000	11	\$201,000

1/ The Office of International Activities applies its expertise in international governmental and cultural relations to the growing edge of Smithsonian programs abroad. Development of Smithsonian program contacts with the Peoples Republic of China, the Soviet Union, and Poland growing out of President Nixon's initiatives and of Smithsonian contributions to United States' UNESCO relations at the invitation of the Department of State are the newest activities undertaken by the Office.

2/ Administration of the Special Foreign Currency Program appropriation of \$3.5 million equivalent in so-called excess foreign currencies embraces scientific review of proposals, assistance in preparation for research abroad, and audit of the grantees' final accounts. During FY 1972 the program made 55 awards bringing the total number of awards since 1965 to 362 valued at more than \$16,000,000 in foreign currencies. In FY 1973 awards can be expected to number more than 50. In FY 1974 awards could number more than 75 if the requested appropriation of \$5,000,000 equivalent in foreign currencies is received.

OFFICE OF INTERNATIONAL ACTIVITIES

1972 Actual.....	\$140,000
1973 Estimate.....	\$155,000
1974 Estimate.....	\$201,000

The Office of International Activities was established in 1965 to foster and coordinate the Smithsonian's many scientific and cultural activities abroad. In this capacity, the Office assists members of the Smithsonian staff working or contemplating work abroad. It is the Institution's point of liaison with the Department of State, American embassies and research institutes abroad, and foreign diplomatic missions in Washington.

Of special importance are efforts to foster Smithsonian scientific and cultural exchanges with the Peoples Republic of China, the Soviet Union and Poland in the wake of President Nixon's initiatives. Moreover, at the invitation of the Department of State, the Office is coordinating the contributions of Smithsonian experts to United States' UNESCO relations.

The Office continues to support the Institution's world-wide environmental and conservation interests, the exchange of scholars and museum professionals, and cultural and scientific objects and information, including exhibits, in the interests of basic research and public education.

The program increase of \$40,000 requested for FY 1974 is in support of the Foreign Currency Program. An additional amount of \$6,000 is required for necessary pay for current staff.

The Foreign Currency Program anticipates a substantial increase in research collaboration in South Asia where large United States-owned accounts of local currencies in India and Pakistan seem assured for an indefinite period. In the period since the Bangladesh fighting, the Pakistani Government has indicated fresh interest in receiving Smithsonian sponsored scientists to develop collaborative research. In India indications are that the Indian Government will seek increasing collaboration in major undertakings like the national environmental assessment program being developed with the Smithsonian. In Burma, the first opportunities to employ P.L. 480 funds for research were developed in FY 1972 and the Smithsonian continues to support a major program in Ceylon.

Satisfactory development of these research programs in South Asia requires a coordinator (\$20,000) to be present in the region for a major part of each year. This is especially true of Smithsonian sponsored research which, in contrast to that of other Special Foreign Currency Programs, is required by law to make its P.L. 480 monies "available only to United States institutions" which consequently actively participate in joint research programs in the "excess" currency countries. Development of successful cooperative arrangements between the United States grantees and host-country institutions depends upon a coordinator who is familiar with host-country laws, regulations, and procedures and can thus save grantee institutions untold time and trouble. Twenty-eight projects currently in the process of development in India, two in Burma, and four in Pakistan stand to profit from the services of such a coordinator in South Asia. Delay in providing such a person means delay or failure in exploiting prospective research opportunities of importance to United States institutions and to science.

The Foreign Currency Program has received beginning with FY 1972 an annual appropriation of \$3.5 million equivalent in "excess" foreign currencies, up \$1,000,000 equivalent, or 40 percent, above the previous year. This increase has meant substantial additional work at the clerical level particularly. Awards totalled 307 at the end of FY 1971, 362 at the end of FY 1972 and can be expected to number about 410 at the end of FY 1973. Concurrent with this increase in awards has been the expected increase in clerical burden involved in formally terminating grants for completed projects. Moreover, distribution of research publications and the preparation and distribution of bibliographies of these publications have also emerged, seven years after the first grant was made, as important functions of the Foreign Currency Program. A clerk-typist (\$8,000) is essential to meet this additional work load.

Additional funds are required for the travel to Washington of members of the Earth and Space Sciences Advisory Council meeting for the first time because of increased activity generated by the growing appropriation of foreign currencies. Additional funds for travel and per diem for Office of International Activities staff to areas where foreign currencies can not be used are also essential. They are needed to meet growing demands on the Institution in environmental assessments, in exchanges with Russia and possibly with the Peoples Republic of China, and in contributing to United States UNESCO relations. Finally, funds are requested to replace the irreparable multiplecopy typewriter which has assisted the Smithsonian Foreign Currency Program to function with a high degree of efficiency despite its small staff (\$12,000).

INTERNATIONAL EXCHANGE SERVICE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MP</u>	<u>Amount</u>	<u>MP</u>	<u>Amount</u>	<u>MP</u>	<u>Amount</u>
Parliamentary exchanges <u>1/</u>	5	\$ 74,000	5	\$ 80,000	5	\$ 87,000
Departmental exchanges <u>2/</u>	2	41,000	2	45,000	2	47,000
Miscellaneous exchanges <u>3/</u>	<u>2</u>	<u>32,000</u>	<u>2</u>	<u>35,000</u>	<u>3</u>	<u>51,000</u>
Total operations	9	\$147,000	9	\$160,000	10	\$185,000

1/ The exchange of official United States publications, including the daily issues of the Federal Register and the Congressional Record, for the official publications of other countries. 14 Stat 573 as amended provides that the exchange of the documents be made through the Smithsonian Institution. In addition, there are approximately 50 bilateral treaties which name the Smithsonian Institution as the U.S. agency through which these exchanges are to be made.

2/ Includes the exchange of departmental publications such as the exchange of U.S. patent specifications for the patents of other countries. Basis for this activity is the Brussels Convention of 1866 to which the U.S. is a signatory.

3/ Includes the exchange of publications of colleges, universities, literary and scientific societies with similar organizations in other countries. This exchange is also based on the Brussels Convention.

INTERNATIONAL EXCHANGE SERVICE

1972 Actual.....	\$147,000
1973 Estimate.....	\$160,000
1974 Estimate.....	\$185,000

Through the International Exchange Service, public and private institutions in the United States exchange their publications with organizations in other countries and receive in exchange publications from those organizations. Begun in 1849 as an exchange service between the Smithsonian Institution and the learned societies in other countries, the program was so successful that five years later it was expanded to other American organizations.

When the Brussels Convention of 1886 was adopted by the United States, the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific, and cultural publications.

14 Stat. 573, as amended, provides that the exchange of the official United States Government publications shall be made through the Smithsonian Institution.

A program increase of \$15,000 is requested to develop the college, university, and other non-governmental exchange program. An additional amount of \$10,000 is required for necessary pay.

The Smithsonian Institution is the only organization in the United States that is providing a service under the Brussels Convention. In recent years, the Exchange Service has been able to accept only a very limited number of publications from colleges, universities, and scientific organizations for exchange because of the rising number of government publications for exchange and increasing costs of shipping. The requested program increase for FY 1974 would be used for an additional shipping clerk and transportation funds to build the level of private exchanges many of which are of particular importance to libraries and medical and dental schools in the developing countries in Asia, Africa, and South America.

DIVISION OF PERFORMING ARTS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Folklife Festival and other Mall activities <u>1/</u>	5	\$191,000	5	\$212,000	6	\$302,000
College Theater Festival <u>2/</u>	1	40,000	1	43,000	1	43,000
Indian awareness <u>3/</u>		14,000	1	8,000	2	25,000
Other performances <u>4/</u>	<u>1</u>	<u>20,000</u>	<u>2</u>	<u>40,000</u>	<u>3</u>	<u>46,000</u>
Total operations	7	\$265,000	9	\$303,000	12	\$416,000

1/ Includes the planning, research, preparations, and operation of the annual Festival of American Folklife, the Institution's largest popular event drawing over 600,000 visitors.

2/ Provides for cosponsorship of the American College Theater Festival with the John F. Kennedy Center for the Performing Arts and the American Theater Association, drawing on college drama talent from across the country.

3/ Includes Indian art, crafts, music and tribal lore presentations at the Folklife Festival and a continuing effort to assist small museums on tribal reservations.

4/ Covers general support of the Division's performance program including workshops and concert activities.

DIVISION OF PERFORMING ARTS

1972 Actual	\$265,000
1973 Estimate...	\$303,000
1974 Estimate...	\$416,000

The Division of Performing Arts is responsible for the presentation of programs dealing with our national aesthetic expressions, particularly as they evidence themselves in oral, music, or dance forms, and relate to the collections of the museums. By staging such events as the annual Festival of American Folklife, the Division undertakes to extend and enliven the Institution's educational services to the public.

An increase of \$109,000 is required in the FY 1974 budget for the Festival of American Folklife, for the Indian awareness program, and for general support. An amount of \$4,000 is needed for necessary pay.

Festival of American Folklife (\$88,000)

Substantial support is required to meet presentation and public service needs for the annual Festival of American Folklife. In previous years Festival participants have been paid minimum honorariums and housed in dormitory facilities at a local college. Honoraria have remained the same since the inception of the Festival in 1967 despite rising costs of living. The increased size of the Festival and the added number of participants make new housing arrangements imperative at increased cost.

Administrative expenses of the Festival have increased due to the added number of requests for local, state, and national assistance and guidance in developing programs in folk culture. Iowa, Ohio, Kentucky, and Maryland have joined the list of states requesting guidance for state programs. Spokane, Washington, has requested consultation and support for the forthcoming Expo' 74. The National Park Service has utilized Festival field research in its program of park interpretation and presentations. Response to these requests has placed additional demands on administrative and clerical services and travel.

The Festival of American Folklife is presented outdoors, on the National Mall. The Mall does not have permanent electrical, sewage, or water services. Only temporary sanitary facilities can be provided for the increased number of visitors. Exhibit facilities and installations are subject to increased wear and tear and demands each year. When the entire Washington area was inundated by the flood waters of tropical storm Agnes, the Mall was reduced to a swamp more than doubling the cost of set-up and restoration.

Beginning with the Festival in 1973, the Division of Performing Arts will shift the basic presentational format to incorporate the themes which will comprise the Bicentennial. These themes are:

1. Old Ways in the New World

World ethnic communities and their American analogues.

2. The Native Americans

The surviving cultures of the American Indian.

3. Working America

The skills, crafts and lore of the American workers.

4. A Regional View of American Life

Regional folklife and local and state expressions.

Funds for the development of these themes are requested under the Bicentennial heading of this budget, but funds for the change in Festival format, which will provide opportunities for exhibit development and organizational experience, are urgently needed as a part of the division's base appropriation. The planned format change will extend the 1973 Festival presentation to a 10 to 14 day time period. These problems and opportunities for further development of the regular annual Folklife Festival require an additional \$88,000 for contractual services, supplies, and equipment.

American Indian Program and General Division Support (3 positions; \$21,000)

The Indian awareness program covers Indian art, crafts, music, and tribal lore. It includes the Indian presentations at the Folklife Festival, a year-round effort to give technical advice and assistance in the establishment of small museums on tribal reservations, and other programmatic activity as may be useful in the economic development of the Indian community. The Bureau of Indian Affairs, which assisted in the establishment of the program, is assisting this year's activity. A program assistant is needed to aid the director of the program in the discharge of these responsibilities, and to help enlarge the scope and effectiveness of the program.

Other required new staff include a technical assistant and a clerk typist to meet the additional workload created by the expansion of the Division's programs, and the added responsibility of assisting state and private cultural organizations. These three new positions will cost \$21,000.

OFFICE OF PUBLIC AFFAIRS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
News dissemination <u>1/</u>	6	\$138, 000	8	\$138, 000	10	\$175, 000
Publications <u>2/</u>	2	86, 000	2	40, 000	2	40, 000
Radio Smithsonian <u>3/</u>	1	55, 000	2	35, 000	2	34, 000
Special e vents <u>4/</u>	4	63, 000	4	68, 000	4	88, 000
Special projects <u>5/</u>	<u>0</u>	<u>30, 000</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Total operations	13	\$372, 000	16	\$281, 000	18	\$337, 000

1/ Wrote and distributed 258 news releases and more than 100 radio announcements in FY 1972. Also prepared and distributed 26, 000 copies monthly of the Calendar of the Smithsonian Institution and launched a new quarterly publication Smithsonian Institution Research Reports.

2/ Over 3 million copies of building guides and leaflets produced for distribution to the public and 39 other information leaflets edited and printed.

3/ Production of weekly radio program distributed to some 80 stations in 33 states. In FY 1973, Office of Public Affairs plans the production of a new weekly radio program.

4/ Arrangements for 250 special Smithsonian and outside organization events using Institution buildings including the Renwick Gallery opening and the International Monetary Meeting. Special events in FY 1973 will include the American Association for the Advancement of Science, the NASM ground-breaking, the Fifth International Symposium (Copernicus), and the Presidential Inaugural Ball.

5/ Production began on the second orientation film "Around the Clock at the Smithsonian."

OFFICE OF PUBLIC AFFAIRS

1972 Actual \$372,000
1973 Estimate \$281,000
1974 Estimate \$337,000

The Office of Public Affairs is responsible primarily for serving Smithsonian visitors and the public at large by communicating information about the Smithsonian and its programs through various media--radio, television, newspapers, popular and scientific periodicals, press releases, documentary films, the Smithsonian Calendar of Events, Dial-A-Phenomena, Dial-A-Museum, and general information pamphlets and publications. Included in its presentations are the Torch newspaper, research reports, and the "Radio Smithsonian" now being heard over 88 stations across the nation.

A program funding increase of \$52,000 is sought for the development and dissemination of information and orientation materials. An amount of \$4,000 is required for necessary pay for current staff.

The need to improve this office's capability for the planning, development, and dissemination of information and orientation materials arises from several sources:

- a sharply increased present demand for information about the Smithsonian's museum and research programs as well as an expansion of interest in the Institution's public exhibits and educational activities.
- new and planned additional museum gallery, and zoological park exhibits and other public service resources that will be major attractions for the public. These include the Renwick Gallery, the Hirshhorn Museum and Sculpture Garden, the National Air and Space Museum, new exhibits at the National Zoological Park under the Master Plan development, and special regular and Bicentennial exhibits on and off the Mall.
- The additional millions of persons planning visits to the Washington, D. C. area over the next several years (some 45 to 75 million visitors are expected in Washington during 1976) whose visits would be made much more enjoyable and educational by the availability of introductory and orientation materials.

In order for this office to serve the public by meeting the above needs, it must augment its present staff and dollar resources to work more closely, and intensively with the museums, galleries, and other bureaus to plan, write, develop, and produce a wide and well integrated array of information and orientation materials including those to be produced in foreign languages, and materials for radio and television dissemination. Funds for the printing of building and exhibit guides are budgeted for primarily by the Smithsonian Press supplemented by the museums and galleries for their special needs and projects. The Office of Public Affairs provides professional and technical assistance in the preparation and dissemination of these and other materials. This is a collaborative effort. The present and future required level of assistance requires that the Office add a writer-editor, clerk typist, and intern-trainee (\$31,000) to the present small staff and obtain \$21,000 for program support including maintenance of computerized mailing lists of services, purchase of paper stock and envelopes, and studies of visitor orientation through films and television.

SMITHSONIAN INSTITUTION PRESS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Research publications in art, history, science, technology <u>1/</u>	16	\$523,000	15	\$502,000	17	\$607,000
Public education <u>2/</u>	7	255,000	8	267,000	8	300,000
Institution reports <u>3/</u>	<u>1</u>	<u>38,000</u>	<u>1</u>	<u>41,000</u>	<u>1</u>	<u>28,000</u>
Total operations	24	\$816,000	24	\$810,000	26	\$935,000

1/ Includes approximately 65 book-length publications which result from the research of Smithsonian staff scientists and curators. The Press staff provides all editorial, design, production, warehousing, and shipping services.

2/ Includes approximately 50 publications, from educational booklets for school children on formally conducted visits to the museums to book-length "Catalogs of Record" of the major exhibits. Also includes hall guides to the museums and numerous free brochures for the public visiting the Smithsonian. All Press services under 1/ are provided.

3/ Includes the Annual Report of the Secretary and public announcements of research, exhibits, and events at the Smithsonian.

SMITHSONIAN INSTITUTION PRESS

1972 Actual.....	\$816,000
1973 Estimate.....	\$810,000
1974 Estimate.....	\$935,000

Press publication activity is a fundamental extension of the work of the Smithsonian's basic research laboratories. Necessary for ecological and agricultural advancement and other basic and applied studies by other researchers, these reports are distributed to major libraries and scientific institutions in all 50 states and many foreign countries. For the many millions of visitors to the Smithsonian each year, the Press produces and distributes exhibit catalogs, education pamphlets, and informative leaflets. Finally, the Press also furnishes the Institution with a variety of necessary manuals, reports, specimen labels, and directories, including copies of Congressional materials and reports from government agencies.

A program increase of \$120,000 is sought for design and printing staff and to fund the printing of a growing number of research and exhibition publications. An additional \$5,000 is required for necessary pay for current staff.

Design and Printing of Publications (1 position; \$16,000)

Increased exhibition and education activities of the National Portrait Gallery, the National Collection of Fine Arts, the Renwick Gallery, and Anacostia Neighborhood Museum have outstripped the Press's ability with present staff to design the necessary exhibition catalogs, hall guides, and public education leaflets. Careful design of these printed materials is essential, not simply for maximum transfer of information, but to secure the most economical procurement within the specifications set by the Congress's Joint Committee on Printing. Funds are requested to correct this problem by the addition of a specialist in the design of printed materials.

Printing Manager (1 position; \$16,000)

The Duplicating Section provides for all duplicating requirements of the Institution. Included are office memoranda, forms, and other administrative issuances.

The Museum Print Shop (funded by the Press's budget) is strictly a letterpress shop; it has no duplicating or offset equipment. It produces specimen labels and other printed materials required by the research, curatorial, and exhibits activities, using special type fonts not available from the Government Printing Office.

For greater efficiency and cost saving these two printing activities, which are now under the supervision of working foremen, should be combined under a Printing Manager. The Printing Manager would review all requests for printing and select the best process (including outside printing) consistent with desired result, time, cost, and other factors. He would fill the void now existing in customer contact, job and process identification, and short-and long-range planning.

Research and Educational Publications (\$88,000)

The Press publishes eight scientific series that are renowned for their high quality of scholarship throughout the world, bringing great credit to the

United States. They are: Annals of Flight; Contributions to Anthropology, Astrophysics, Botany, Earth Sciences, Paleobiology, and Zoology; and Studies in History and Technology. These publications form the core scientific and technical collections in libraries throughout the United States, especially in poorer countries, in areas serving primarily Indian-Americans, Mexican-Americans, and vast agricultural interests. Over the years, and especially more recently, their contribution to the understanding of our ecology and environment has been invaluable to scores of government agencies, federally supported colleges and universities, and individual research scientists.

Additionally, catalogs produced by the Press for the several Smithsonian art, history, and technology museums become the "publications of record" that will be used by scholars for generations to come, often in the National Archives and in the Library of Congress.

For the last five years federal funding for the Press has grown about 10 percent per year. Salaries and other expenditures were \$577,000 in FY 1969, and in FY 1973 they are anticipated to be \$810,000. But the Press' program capability to serve the publications needs of the Institution has not grown commensurately with the indicated funding growth of \$233,000. Legislated salary and benefit increases have consumed about 32 percent (\$70,000) of the growth, while another approximate 30 percent \$70,000 has been for personnel costs associated with the approved transfer of four staff members from the Press' privately funded staff to federal employment. (Total Press employment of about 27 is below the level of 1968.) The balance (approximately 38 percent or \$88,000) has been utilized for printing and other costs associated with the Institutional publications programs. Needless to say, much of the purchasing power of this amount has eroded away over the years because of inflation (printing costs increase about 7 percent a year).

Meanwhile, because of Institutional growth in exhibits programs, basic research, and collections-related activities which result in publishable materials, the workload of the Press has been growing at a rate which is outstripping its ability to serve the professional staff. In FY 1972, the Press lacked funding to produce backlogged materials, already written and ready for the Government Printing Office, in the amount of \$163,000. For FY 1974, an increase in printing funds of \$88,000, or roughly half the current shortage is requested. The Press is seeking other means of correcting its shortage of printing funds. In FY 1973, steps are being taken to utilize GPO photo-offset technologies wherever possible to avoid the high costs of type-setting and letter press printing. Bureaus and museums of the Institution with heavy printing requirements are seeking FY 1974 funds which will enable them to share with the Press the publication costs of major volumes associated with their particular activities. Commitments of Press funds to various publication endeavors are being examined and items of low priority are being reduced or eliminated.

OFFICE OF MUSEUM PROGRAMS AND ADMINISTRATION
OF THE NATIONAL MUSEUM ACT

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Training program <u>1/</u>	1	\$ 38,000	2	\$ 48,000	2	\$ 50,000
Psychological and sociological studies <u>2/</u>	1	60,000	3	90,000	3	90,000
Special projects <u>3/</u>	<u>2</u>	<u>152,000</u>	<u>3</u>	<u>181,000</u>	<u>4</u>	<u>207,000</u>
Total operations	4	\$250,000	8	\$319,000	9	\$347,000

1/ Includes programs which provide workshops, classes, and individual instruction for museum personnel at the Smithsonian and other museums in conservation and exhibit techniques. In FY 1972, a project to develop and produce 100 video tapes on conservation methods was initiated. In FY 1973, 12-15 formal workshops in exhibit preparation and design will be offered. Training activities will continue in FY 1974.

2/ Includes a program of research in exhibit effectiveness, visual learning systems, cognition and perception in a museum environment. In FY 1972, (1) a special three day conference of psychologists and museum personnel was held to design a strategy for research in the museum environment, (2) evaluation of an exhibit at the Renwick Gallery was funded, and (3) a special issue of Museum News on psychological research in museums was underwritten. In FY 1973, (1) research on the effectiveness of the Hall of Electricity will be conducted, (2) evaluation of the educational demonstration program used in the pharmacy exhibit will be made, and (3) a consortium of museums to combine their research resources in this area will be established. In FY 1974, studies concerned with visitor motivation and the social experience of museum visiting will be explored.

3/ Includes studies and programs of large scope and major interest to the museum profession such as: (1) experimental exhibit approaches, (2) library management problems, (3) central conservation facilities, and (4) registration methods.

OFFICE OF MUSEUM PROGRAMS AND ADMINISTRATION
OF THE NATIONAL MUSEUM ACT

1972 Actual.....\$250,000
1973 Estimate.....\$319,000
1974 Estimate.....\$347,000

The Office of Museum Programs oversees and reviews the Smithsonian Institution's museum and exhibition activities, with special emphasis on developing experimental and educational exhibits, surveying visitor reactions to the Institution's services, and providing advice and technical assistance to other museums. It cooperates with museum professionals and their associations and organizations to increase the effectiveness of museums in the performance of their scholarly and public education functions. The Office of the Registrar, the Conservation-Analytical Laboratory, the Office of Exhibits, the Smithsonian Libraries, the Smithsonian Institution Traveling Exhibition Service, and the National Museum Act are under the general administration of this Office.

In FY 1974, a new position of executive assistant to the Assistant Secretary for Museum Programs is requested and an increase of \$25,000 to cover the salary and benefits of the assistant and necessary expenses for his work. An amount of \$3,000 also is requested for necessary pay.

The assistant will be responsible for coordinating Smithsonian-wide studies to determine the most effective means of reorganizing and implementing the reorganization of the Office of the Registrar, the Office of Exhibits, and the Smithsonian Libraries.

These three offices, are, in various degrees, performing centralized services which, in some cases, do not seem to be fully responsive to the needs of the units served. This has led to the development of semi-autonomous groups, performing certain functions which should be carried out by the central office. The executive assistant's task will be to coordinate the studies undertaken to remedy this situation; obtain expert advice from professionals in other fields, i.e., video-linkage, computerization, etc.; cooperate with the Conservation-Analytical Laboratory in developing a master plan leading to the creation of a National Institute of Conservation; and help to develop space requirements including the possible consolidation of certain Smithsonian activities in one facility, possibly, to be called a "Learning Resources Center". This might include centralized computerization, master video-transmission, Conservation-Analytical Laboratory, a portion of the Registrar's activities, and the headquarters of a central library which might serve semi-autonomous unit libraries in various Smithsonian bureaus in the same way as a library system serves its autonomous clients.

Successful completion and implementation of these studies will lead to far greater efficiency, and a reduction in costs in relation to the services obtained.

The Executive Assistant also will assist the Assistant Secretary in coordinating the activities of his office as they relate to national and international organizations.

CONSERVATION-ANALYTICAL LABORATORY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Conservation advice <u>1/</u>	2	\$ 25,000	2	\$ 25,000	3	\$ 34,000
Conservation treatment <u>2/</u>	4	61,000	6	107,000	11	168,000
Analytical support <u>3/</u>	<u>5</u>	<u>109,000</u>	<u>5</u>	<u>137,000</u>	<u>9</u>	<u>263,000</u>
Total operations	11	\$195,000	13	\$269,000	23	\$465,000

1/ In FY 1972 provided advice to some 45 Smithsonian persons and offices, answered 150 letters, and responded to approximately 500 telephone calls. Expect activity to continue at about this same level in FY 1973. Additional clerk in FY 1974 will enable the Lab to be more responsive to a growing number of inquiries from within and outside the Institution.

2/ In FY 1972 treated 420 objects from 33 sources. Forty conservation lectures were given with an average attendance of 73. For FY 1973 60 requisitions for 130 objects are already on hand. A small fumigator is being installed in the History and Technology Building to eliminate the possibility of insect infestations at the source. Substantial increase in conservators proposed for FY 1974 to begin to cope more adequately with millions of artifacts in dire need of attention.

3/ In FY 1972 the Lab made 5,600 elemental analyses on pottery, glass, metals, pigments, fibers, and other substances in support of conservation and curatorial needs. Improved instrumentation obtained in FY 1973 budget will increase output. The proposed FY 1974 staffing increase is required to support additional conservation work as well as to meet the needs of the curatorial staff for analytical work in support of research.

CONSERVATION-ANALYTICAL LABORATORY

1972 Actual.....	\$195,000
1973 Estimate.....	\$269,000
1974 Estimate.....	\$465,000

The Conservation-Analytical Laboratory was established in 1963 to serve the museums of the Smithsonian Institution. Staffed by conservators and scientists, it ascertains and advises on the suitability, for artifacts displayed or in storage, of environmental conditions found in the buildings and suggests remedial action if necessary. Based upon examination or analysis, advice is given to curatorial units on conservation procedures for specific objects. Objects which present special problems or require more specialized equipment than is available in these units are treated in the central laboratory.

Analyses of objects or their materials (e.g. pigments, fibers, alloys or corrosion products) by advanced instrumentation serve to determine appropriate conservation procedures or to provide museum archeologists and historians with basic research data concerned with dates, attribution, and ancient production methods. Commercial products proposed for prolonged contact with artifacts (such as in storage, fumigants) are examined for suitability.

The conservation program of the Smithsonian requires space, personnel and operating support. It is anticipated that a little more space will become available in FY 1973 and an increase of \$193,000 is requested for ten positions and efficiency-raising equipment. An additional \$3,000 is required for necessary pay.

Manpower and facilities devoted to general Institution conservation tasks are woefully inadequate. Accessions of artifacts number about 130,000 per year. Some single accessions represent hundreds of objects. Many of these are invaluable and a large proportion require immediate and extensive treatment to forestall decay. If only thirty minutes were applied to each newly-acquired object (two hours is an actual minimum of treatment), this would represent 32 man-years of necessary work each year, exclusive of the needs of deteriorating objects already in the collection. Central staffing and space needed to cope efficiently and adequately with the preservation and conservation of the Smithsonian's collections is estimated conservatively at thirty conservators, supported by fifteen scientists and 60,000 square feet of well-outfitted laboratory space.

The Conservation-Analytical Laboratory now has four conservators and five scientists for a wide variety of tasks; other units, in the National Portrait Gallery, National Collection of Fine Arts, the Freer Gallery and the Department of Anthropology total about seven conservators and two scientists whose efforts are focussed on specialized local needs. The Laboratory occupies an overcrowded 2,600 square feet. In FY 1972, with limited staff and space it treated 420 objects (varying in nature from archaeological to space-age) from bureau collections.

The requested funding increase would provide four conservators, four scientists, an information clerk, and a clerk typist and additional equipment for study and analysis, such as atomic absorption, differential thermal analysis, thermoluminescence dating, and ultraviolet spectrophotometry.

OFFICE OF EXHIBITS PROGRAMS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
New work <u>1/</u>	111	\$1,995,000	107	\$1,969,000	128	\$2,808,000
Upgrading <u>2/</u>	5	179,000	12	231,000	15	256,000
Maintenance <u>3/</u>	15	249,000	15	260,000	15	366,000
Miscellaneous <u>4/</u>	<u>9</u>	<u>157,000</u>	<u>4</u>	<u>92,000</u>	<u>5</u>	<u>87,000</u>
Total operations	140	\$2,580,000	138	\$2,552,000	163	\$3,517,000

1/ Includes the preparation of new core, temporary, or special exhibits or the complete change of an entire section of an existing exhibition. During FY 1972 the Office of Exhibits participated in the planning, design, production and installation of 41 new exhibits. Major presentations among these were "125th Anniversary of the Smithsonian Institution" and "Drugs--A Special Exhibition" which received an award from the National Coordinating Council on Drug Education. The halls of "Graphic Arts" and "Monetary History" were opened in the fire damaged areas of the National Museum of History and Technology and "Our Restless Planet" and the "Insect Zoo" in the National Museum of Natural History. "Ballooning" and "World War I Fighters" were the first comprehensive presentations of the National Air and Space Museum. The Office also prepared several exhibits for the newly opened Renwick Gallery.

2/ Upgrading involves the change, modification, correction of, or additions to existing exhibits. Thirty-one exhibits received attention in FY 1972. This is a continuing requirement to assure updated and authoritative presentations in Smithsonian exhibits.

3/ Maintenance is the routine, responsible care and upkeep of existing exhibits to replace components destroyed by normal wear or occasional vandalism or accidental breakage. The very important need to improve maintenance is a significant factor in the FY 1974 budget request.

4/ Miscellaneous projects include a great variety of specialized or technical assistance occasionally required by other Smithsonian units. Most tasks are exhibit-related projects, however, the talents and experience of the Office of Exhibits staff are sometimes uniquely capable of assisting in scientific or research needs.

OFFICE OF EXHIBITS PROGRAMS

1972 Actual.....	\$2,580,000
1973 Estimate.....	\$2,552,000
1974 Estimate.....	\$3,517,000

The Office of Exhibits, working in close and continuing collaboration with museum scientists, curators, and historians, is instrumental in preparing and maintaining exhibits seen by the millions of people a year who visit the Smithsonian museums. Concerned mainly with the presentation of concepts, ideas, information and objects related to the natural sciences, history, technology, and the flight sciences, the Office of Exhibits provides advanced training in exhibit techniques to hundreds of museum professionals from museums in the U.S. and other countries each year. With the same Office, studies are now being directed to record visitor reaction, participation and involvement in museum exhibits to learn more about the process of communicating ideas.

The relatively static budget allocations of the past several years have restricted the Office of Exhibits to design programs for major exhibits, a modest program of changing special exhibits and considerable efforts to modify, upgrade, update and maintain existing exhibits. New and essential exhibit programs now need attention and are the basis for the budget growth requested for FY 1974. A program increase of \$900,000 and necessary pay funds of \$65,000 are requested.

A New Air and Space Museum on the Mall (13 positions; \$637,000)

The development, design, and preliminary production of exhibits for the new National Air and Space Museum--scheduled to open in 1976 must begin and continue concurrently with the construction of the new museum building on the Mall. Past experience in similar programming for the History and Technology building will assure efficient and productive efforts in the new NASM program. Thirteen positions (\$152,000) are requested to form the nucleus of an exhibit resource for the new museum building and other object class funds (\$485,000) are requested for the purchase of cases, panels, other exhibit fixtures, equipment, and special service contracts that will be necessary to properly equip the 250,000 square feet of exhibits documenting achievement in the history of air and space flight.

Adequate Maintenance of Existing Exhibits (12 positions; \$263,000)

The use of audio visual and special effect techniques combined with the normal wear and tear on permanent exhibits has increased the requirement for a continuing maintenance program in all Mall museum buildings. At present this is provided by the highly skilled specialists at the sacrifice of new exhibit program requirements. Twelve positions (\$95,000) are requested to establish maintenance teams to provide daily attention to existing exhibits. Five positions will be permanently assigned to the Natural History building and two positions will be permanently assigned to the south group of public exhibit spaces in the Arts and Industries building, the Great Hall of the Smithsonian Institution Building, and the temporary "tin shed" Air and Space building. Other object class funds (\$168,000) are requested to replace worn and vandalized exhibit components and to replace mechanical equipment, some of which has had to be removed in the past. This increase

will have noticeable impact on Smithsonian programs in that the efforts of the more experienced staff of the Office of Exhibits can be redirected to the development and production of exhibits on new knowledge developed by Smithsonian scientists, curators and historians and to Bicentennial presentations. Of considerable concern, also, is the maintenance of the high standards, nationally and internationally recognized, of Smithsonian exhibits.

OFFICE OF THE REGISTRAR

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Transportation <u>1/</u>	7	\$128,000	7	\$135,000	7	\$136,000
Mail and messenger service <u>2/</u>	10	85,000	13	102,000	13	104,000
Records and specimen control <u>3/</u>	7	80,000	8	101,000	8	104,000
Foreign travel (documents) <u>4/</u>	1	7,000	1	10,000	1	10,000
Public service <u>5/</u>	<u>2</u>	<u>23,000</u>	<u>2</u>	<u>25,000</u>	<u>2</u>	<u>25,000</u>
Total operations	27	\$323,000	31	\$373,000	31	\$379,000

1/ In FY 1972 transportation support was provided for the various programs of the Institution by moving more than 24,000 parcels and pieces of cargo including museum specimens, exhibition materials, field equipment, and household goods. Approximately 100 Customs entries were accomplished. This support will continue in 1973 and 1974, expanding to meet the demands of the growing program requirements of the Smithsonian.

2/ In 1972 some 2,000,000 pieces of mail were carried by the mail clerks for all local Smithsonian bureaus except the National Zoological Park and the National Gallery of Art. Messenger service was provided for shops on and off the Mall. In 1973 and 1974 mail service will expand to the offices newly located in L'Enfant Plaza and the Hirshhorn Museum.

3/ The Office is responsible for recording and safeguarding the documents pertaining to the legal ownership of objects accessioned into the collections of the National Museum of Natural History and National Museum of History and Technology, and maintaining records concerning museum specimens. In 1972 a project to microfilm the accession records was begun. In 1973 this project will be expanded with the addition of another archives technician on a temporary appointment to aid in microfilming. The program will continue in 1974.

4/ Passports, visas, inoculation authorizations, entry and collecting permits, and introduction letters were obtained for 300 Smithsonian foreign travelers in 1972. The program will continue in 1973 and 1974 expanding as necessary to meet the increasing needs of the Smithsonian staff.

5/ The Office of the Registrar receives all mail addressed generally to the Smithsonian Institution, covering a wide variety of general information questions, as well as questions relating to specific Institution programs. In 1972 over 20,000 inquiries were processed in the Office. As Smithsonian programs grow and continue to stimulate the public, so will demands on the Office for coordination of public inquiries.

OFFICE OF THE REGISTRAR

1972 Actual.....	\$323,000
1973 Estimate.....	\$373,000
1974 Estimate.....	\$379,000

The Office of the Registrar was established in 1881 in serve as a central point for officially accessioning and recording the specimens and objects coming into the Institution. It now has responsibility for recording and safeguarding the documents pertaining to the receipt and legal ownership of the items accessioned into the collections of the National Museum of Natural History and the National Museum of History and Technology. In addition, the Office provides essential support services to all units of the Smithsonian in their research, education, collection management, and exhibition programs, by operating the central mail room and the shipping office, handling U.S. Customs clearances, servicing public inquiries for the Museums, providing the central messenger service, and obtaining official foreign travel documents such as passports, visas, and work permits.

No program fund increase is requested for FY 1974. An amount of \$6,000 is needed for necessary pay.

SMITHSONIAN INSTITUTION LIBRARIES

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Acquisition and processing of information resources <u>1/</u>	13	\$337,000	13	\$370,000	17	\$481,000
Collection analysis <u>2/</u>	13	194,000	18	227,000	23	303,000
Information delivery services (general) <u>3/</u>	12	177,000	12	199,000	15	251,000
Information delivery services (Bureau level <u>4/</u>	<u>10</u>	<u>156,000</u>	<u>18</u>	<u>262,000</u>	<u>23</u>	<u>308,000</u>
Total operations	48	\$864,000	61	\$1,058,000	78	\$1,343,000

1/ Includes the purchase and acquisition by gift and exchange of books, journals, documents, maps, technical reports, bibliographic and indexing services, computer data bases, and other reference and information resources for research, and the preparation of these materials for use (e.g. binding, filming).

2/ Includes the classification by subject, the cataloging, indexing of library and information resources, and the maintenance of union and branch catalogs, special inventory listings, and the development of means of access to these records.

3/ Includes the circulation, reference and interlibrary lending services of the central library facility of the Libraries, and the operation of special Institution-wide services and facilities such as photocopying and translation programs and Rare Book Room.

4/ Includes the establishment and operation of branch and other local library working collections and all aspects of information and library service within the research laboratories, the museums and offices of the Institution.

SMITHSONIAN INSTITUTION LIBRARIES

1972 Actual.....	\$ 864,000
1973 Estimate.....	\$1,058,000
1974 Estimate.....	\$1,343,000

The Smithsonian Institution Libraries provide the documentary information base and the information search and delivery services that are required by, and contribute directly to, the research, exhibits, and administrative programs of the various bureaus and offices of the Institution.

The FY 1974 increase of \$274,000 is sought to continue the program of upgrading the Institution's library-based information services to the level required by modern advanced research, and to integrate the dispersed collections into a systematic network of information and library centers. An additional amount of \$11,000 is required for necessary pay.

Extend Basic Services (8 positions; \$93,000)

Library staffing for the branch libraries and information centers, most of which were unmanned in 1964, has reached 40 percent of a goal of 37 positions. Five new positions are requested for the major developing program areas of the Institution, principally the branch libraries of the National Air and Space Museum, Radiation Biology Laboratory, National Zoological Park, National Museum of History and Technology, and the Remington-Kellogg Library of Marine Mammalogy. These positions will allow the Libraries to give reference and information assistance to researchers in and near the laboratories and offices, and to maintain the branch library and working office collections in useable order (\$43,000).

The Libraries possesses a number of specialized information resources that are difficult to mobilize because of the lack of manpower to organize, catalog, and service them. Three positions are requested to work with two of these collections (maps and rare books) that are frequently sought by researchers. Experiments in information service involving computerized data bases will be conducted and equipment for housing reference materials will be acquired (\$50,000)

Acquisition of Information Sources (4 positions; \$108,000)

In FY 1973 the Libraries will have reached about 45 percent of their goal of \$300,000 funding to acquire the books, journals, and other documentary resources from throughout the world that are considered essential to information services in the subjects relevant to the Smithsonian research and exhibit programs. The requested increase in book and journal funds for FY 1974 (\$57,000) will move the Libraries to within about two-thirds of their goal, allowing chiefly the acquisition of new journals in art and science, special publication series (e.g. the ultramicrofiche editions of research monographs in American culture offered by Encyclopedia Britannica) and new editions of guides to sources of information such as the major national and subject bibliographies and indexes. Based on generally accepted workload standards, one additional staff member in technical processing is required for each \$15,000 worth of new material added plus expected continued donations of gift and exchange materials (\$40,000).

An additional goal in the FY 1974 budget request is to improve the Libraries' capability in filming, binding, and other processing of deteriorating collections (\$11,000).

Provision of Access to Information Resources (5 positions; \$73,000)

Personnel to catalog and index the input of information resources to prepare it for access remains inadequate to the task. The control file of backlogged cataloging increased 25 percent in FY 1972. It now contains some 6,000 items (about 4 manyears of work). The unprocessed collections of major gifts and transfers of library materials from other libraries contain at least 50,000 titles. The requested five positions for the Libraries' technical processing center would increase the timely handling of current input and limited inroads on backlog (\$49,000).

The Libraries also requires additional funds to use for the hiring of temporary task forces or the letting of contracts to classify, catalog, and in some cases recatalog, existing unprocessed and poorly arranged branch collections. This work cannot be handled by the normal staff of the technical processing center in addition to their normal work. The first contract would be for the cataloging of the Air and Space Library, which is about 80 percent unprocessed. (Botany, Entomology, Natural History, the Zoo and the Museum of History and Technology will follow in subsequent years \$24,000).

Automation of library routines and information services is required in order to increase the productivity of library staff, thus reducing the rate of rise in the cost per user of providing information services. In-house automation has proceeded as far as it can without major additional work. The Smithsonian Institution Libraries are leading the effort in the Federal government to create a Federal Library Cooperative Center that will allow many libraries to share the normally great expense of automation.

TRAVELING EXHIBITION SERVICE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Traveling exhibits <u>1</u> /					7	\$115,000

1/ FY 1972 brought wider distribution of exhibits by computerizing museum and gallery lists, redesigning annual catalog to make it more widely available, the administration of the tours of 106 exhibitions, the production of four catalogs, and the realization of 511 installations throughout the country.

In addition to SITES' objective to produce three, phase out two and refurbish one exhibition per month in FY 1973, SITES expects to add to its offerings in areas other than art and to develop a plan to enable the Smithsonian to serve the public through the circulation of Smithsonian produced exhibitions. In FY 1973 SITES will complete an educational research project initiated in FY 1972 to survey exhibitors' needs for multi-media material to augment exhibitions. SITES will continue to incorporate exhibitors' in-put into exhibition quality and kind as a result of a questionnaire survey and in person interviews in FY 1972.

Additional program funds will enable SITES to further research, develop, and fulfill its mandate to increase and diffuse knowledge by means of offering traveling exhibitions and related educational programs more equitably across the nation.

TRAVELING EXHIBITION SERVICE

1972 Actual.....\$ 0
1973 Estimate.....\$ 0
1974 Estimate.....\$115,000

The Smithsonian Institution Traveling Exhibition Service provides a planned program of carefully selected, well-designed, and widely circulated traveling exhibitions covering a diversified range in the fields of art, design, science, technology, history, and education. The Smithsonian Institution is not always easily accessible to people away from the Washington area. SITES is the vehicle for taking the nation's treasures to them - to the library in Cairo, Georgia, to the museum in Midland, Texas, and the univeristy gallery in Moscow, Idaho. SITES in the only nation-wide organization circulating exhibitions of an inter-disciplinary curriculum serving specialized and general museums, galleries, schools, universities, libraries, and cultural organizations throughout the nation. It is estimated that three to five million persons saw SITES exhibits in FY 1972. As a public service SITES is committed to providing this educational program to exhibitors for the lowest possible rental fee.

In FY 1974 an amount of \$115,000 for seven positions and \$22,000 support costs is being sought to continue these operations.

SITES seeks additional resources for the necessary balance of public and private funding which will carry out services that private funding can no longer support by itself. This balance will promote the needed further development of the traveling exhibits program and allow the participation of institutions regardless of their financial status.

SITES since its inception has been funded through the private resources of the Smithsonian. Most costs for these exhibits were recovered by charging rental fees to the universities, colleges, museums, and historical societies that requested exhibitions. Over the years, soaring costs of personnel, production, and shipping have increased the rental of these exhibits beyond the means of many of the users, especially the smaller museums and historical societies. The graph, figure 1, clearly shows that as the rental fees increase above \$200 the number of installations decreases in about the same proportion. Figure 2 shows that the cost of each exhibit has been increasing at a very substantial pace. In 1957, 75 percent of all exhibits cost under \$200, while in 1972 only 34 percent of all exhibits were under \$200. The number of installations dropped from 892 in FY 1968 to 511 in FY 1972.

The practical effect has been that costs exceed income and the limited unrestricted private funds have been forced to absorb annual deficits as shown below.

1969	\$19,000
1970	20,000
1971	3,000
1972	22,000

The deficit for FY 1973 is projected to be in the neighborhood of \$15,000 and the Institution cannot afford continued losses. It would not be in the nation's best interests, however, to terminate, drastically reduce, or orient this program to the wealthier customers.

The FY 1974 budget request provides for the following private roll staff conversions to federal (the SITES director, three exhibits coordinators, and the registrar). Two exhibits specialists will be hired to assist with display and packaging production. This is \$93,000 for personnel costs and benefits. An additional \$22,000 will be used for travel, transportation, and production supplies and equipment.

Figure #1

INSTALLATIONS PER FY COMPARED TO NUMBER OF SHOWS OFFERED PER FY ABOVE AND BELOW A \$200 RENTAL FEE

INSTALLATIONS

SHOWS

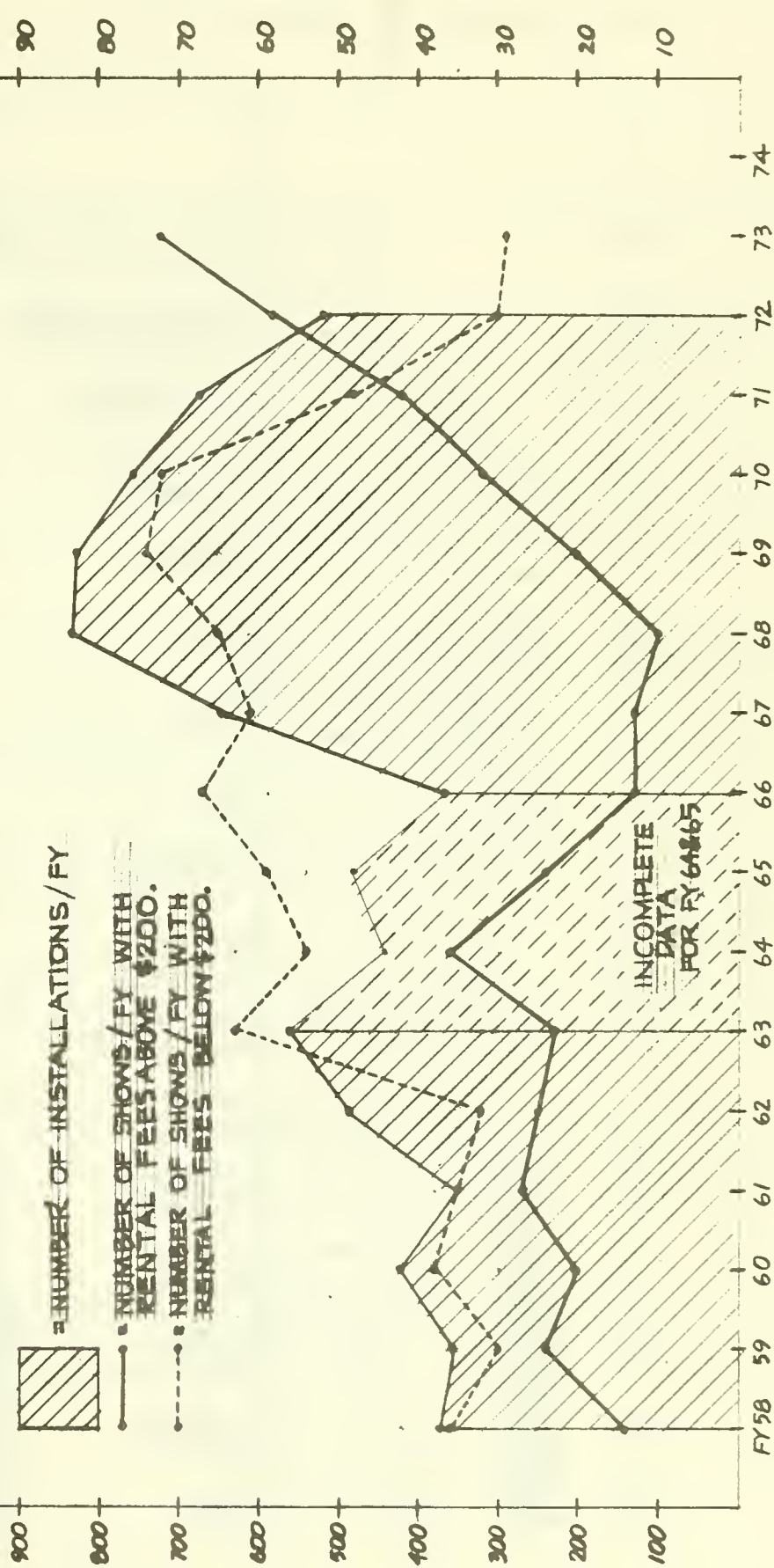
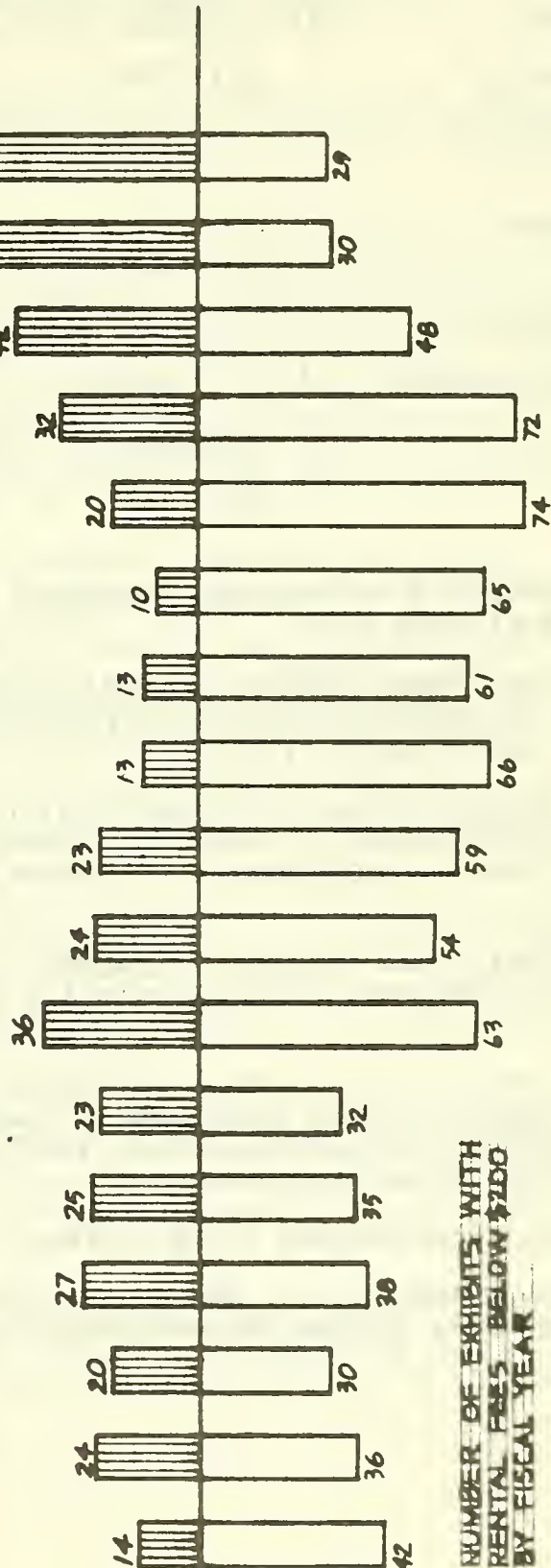


Figure #2

NUMBER OF EXHIBITS
WITH RENTAL FEES
ABOVE AND BELOW
\$200 BY FISCAL YEAR

NUMBER OF EXHIBITS WITH
RENTAL FEES ABOVE \$200
BY FISCAL YEAR



NUMBER OF EXHIBITS WITH
RENTAL FEES BELOW \$200
BY FISCAL YEAR

FY57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73

NATIONAL MUSEUM ACT

<u>Program Categories</u> <u>1/</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Technical programs <u>2/</u>		\$117,000		\$220,000		\$ 285,000
Curatorial/interpretative programs <u>3/</u>		92,000		100,000		145,000
General management programs <u>4/</u>		114,000		170,000		220,000
Professional assistance <u>5/</u>		38,000		50,000		90,000
Support and administration <u>6/</u>	3	39,000	3	58,000	3	60,000
Other <u>7/</u>	-	<u>200,000</u>	-	<u>200,000</u>	-	<u>200,000</u>
Total operations	3	\$600,000	3	\$798,000	3	\$1,000,000

1/ All projects funded are for training, research, or publication within the stated scope of the program area.

2/ Includes programs where greater technical knowledge and skills are essential such as: a) exhibit techniques; b) conservation techniques; c) archival, library, and research resources.

3/ Includes: a) studies in specific subject areas provided the project has implications for the profession; b) exhibit evaluation and experimentation; c) interpretive and educational programs; d) studies of museum practices and functions.

4/ Includes practices within the areas of general management, registration and management of collections, and the design and planning of physical facilities.

5/ Includes: a) programs and services that enable existing museums to respond more effectively to their community; b) seminars and conferences that encourage greater communications among personnel in museums and between museums and related organizations.

6/ Includes general administration of the program.

7/ Under the National Museum Act legislation, \$100,000 must be transferred to each of the National Endowments for a total of \$200,000.

NATIONAL MUSEUM ACT

1972 Actual.....	\$ 600,000
1973 Estimate.....	\$ 798,000
1974 Estimate.....	\$1,000,000

Public Law 91-629 approved December 31, 1970, reauthorized appropriations for the National Museum Act through FY 1974 and funding of \$1,000,000 to the Smithsonian Institution each year. Of this amount \$798,000 was appropriated for FY 1972.

Funds appropriated to the Smithsonian Institution for the implementation of the National Museum Act are made available, primarily by grants and contracts, to museums, professional associations, and individuals. Such funding is made in concert with the National Museum Act Advisory Council appointed for this purpose by the Smithsonian Institution. The membership of the Advisory Council encompasses the principal museum disciplines -- art, science, and history -- and is broadly representative of all regions of the United States. The Council advises and assists the Secretary in determining priorities and assessing the quality of individuals and programs seeking support under the Act.

The full authorized amount of \$1,000,000 is requested. This represents a \$202,000 increase over current appropriations of \$798,000. In FY 1972, the total sum of grant application requests received by the office exceeded two million dollars of which a total of \$361,532 were funded (\$200,000 of the appropriation are transferred to the Endowments as per the legislation of the National Museum Act.) Of the balance of the grant requests received, the Advisory Council would have supported an additional \$396,676 in grants if funds were available. For FY 1973, a total of \$3,144,031 in requests has already been received within the first quarter (exceeding last year's total) and by the end of this year, the sum will increase proportionately.

The needs of the museum profession are great. The National Museum Act is a technical assistance program granting funds for specific proposals which advance the museum profession at large, either through training, research, publication, or professional assistance. Through these programs, current museum personnel have the opportunity to improve their skills and new personnel entering the profession have the opportunity to receive training which was not available previously.

In addition to reviewing and processing grants, the Office of Museum Programs received over 600 inquiries about museum methods, problems, and opportunities. At the working level, the Smithsonian Institution and the Endowment through their respective Offices of Museum Programs, regularly consult and review programs in order to avoid overlap.

Based upon the positive response of the museum profession to the National Museum Act, the quality of the specific requests, and the great needs of the profession, funding at the full \$1,000,000 level will permit the Smithsonian to support fully all aspects of the National Museum Act.

SMITHSONIAN INSTITUTION SPECIAL PROGRAMS

This group of activities is considered to be of particular importance in implementing desired growth in the Institution's activities over the next several years. Some supplement program activities of the museums and galleries. For instance, opportunities are provided for outstanding pre- and post-doctoral investigators from across the nation to be selected for work under the supervision of the Institution's professional staff. External education services are provided by means of popular museum tours for school children and other education services. Other special programs provide the basis on which the Institution affects dramatic changes in its exhibits and research efforts. The major exhibits program request is geared to plan and produce three exhibits of unusual significance and timeliness in the Natural History, History and Technology, and Air and Space Museums. The Bicentennial of the American Revolution request is most necessary to advance the Institution's efforts to celebrate and portray the first two-hundred years of American history and what they may mean for the future. The environmental science program request speaks to the fourth year of a coordinated Institutional effort to shed light on ecological problems in the nation, and the research awards request will enhance the Institution's ability to fund especially meritorious work of its professionals.

AMERICAN REVOLUTION BICENTENNIAL PROGRAM

<u>Program Categories</u> ^{1/}	<u>Through FY 1973</u>	<u>FY 1974 Estimate</u>
Special Bicentennial exhibits	\$ 727,000	\$1,277,000
Scholarly projects	198,000	310,000
National outreach	345,000	350,000
Planning, design, and coordination	<u>240,000</u>	<u>50,000</u>
	\$1,510,000	\$1,987,000

^{1/} See American Revolution Bicentennial supplement to the budget for FY 1974.

AMERICAN REVOLUTION BICENTENNIAL PROGRAM

1972 Actual.....	\$ 356,000
1973 Estimate.....	\$ 754,000
1974 Estimate.....	\$1,987,000

The Smithsonian Institution is preparing to play a central and major role in the celebration of the American Revolution Bicentennial in the Nation's Capital as well as throughout the country. Taking the purpose, in President Nixon's words, of "...a new understanding of our heritage", the Smithsonian has chosen as an overall theme for its Bicentennial program, The American Experience. Many aspects of man's life and work in America, both past and present, are being researched. Individual projects encompass his social, political, and military institutions; his fine arts, his applied arts, and his performing arts; his use of natural resources; and his adventures of exploration on this planet and into outer space. Almost every department is engaged in Bicentennial related projects ranging from scholarly studies on our American past to major exhibits and an entire new museum.

The program will phase out after 1976, but most of the projects are being designed to produce accomplishments which will remain for permanent inspiration and education.

An appropriation of \$1,987,000 will be used for the continued development of the following projects.

Special Bicentennial Exhibits

"A Nation of Nations" (National Museum of History and Technology)	\$ 850,000
"Ecology USA/200" (National Museum of Natural History)	150,000
"Centennial - 1876" (Arts and Industries Building)	20,000
"The Artist and the American Scene" (National Collection of Fine Arts) and "Design in the City" (Renwick Gallery)	100,000
Series of exhibits on the Revolution period (National Portrait Gallery)	<u>157,000</u>
	\$1,277,000

Scholarly Projects

Inventory of American Paintings before 1914 (National Collection of Fine Arts)	\$ 80,000
Bibliography of American Art (Archives of American Art)	50,000
Encyclopedia of North American Indians (Center for the Study of Man)	<u>180,000</u>
	\$ 310,000

National Outreach

Traveling exhibits	\$ 150,000
Bicentennial Festival of American Folklife (Division of Performing Arts)	150,000
Exhibits Design and Production Laboratory (Anaesthesia Neighborhood Museum)	50,000
	<u>\$ 350,000</u>

Planning, Design and Coordination

	<u>\$ 50,000</u>
	\$1,987,000

Additional details on these and related Bicentennial projects are found in the supplement to this budget.

ENVIRONMENTAL SCIENCES PROGRAM

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Marine shallow water ecosystems <u>1/</u>	5	\$176,000	7	\$179,000	7	\$180,000
Deciduous forest ecosystems <u>1/</u>	3	92,000	3	94,000	3	95,000
Earthwatch <u>2/</u>	—	—	—	—	—	<u>100,000</u>
Total operations	8	\$268,000	10	\$273,000	10	\$375,000

1/ In FY 1971 \$150,000 was appropriated for coordinated environmental research at the Smithsonian. In FY 1972 and again in FY 1973, \$275,000 was appropriated for this program. This support has enabled the separate bureaus of the Smithsonian to develop jointly a plan to assemble and analyze biological and physical data on specific important ecosystems to predict the consequence of environmental change. Two Smithsonian research facilities, the Smithsonian Tropical Research Institute and the Chesapeake Bay Center for Environmental Studies, are the principal sites used to carry out these studies. Work is now underway on a variety of projects in carefully selected geographical areas using the staff resources of several of the Smithsonian science bureaus.

2/ The Smithsonian would undertake this new program which will further utilize the interdisciplinary research on the environment already being carried out under the Environmental Sciences Program. One major result of the U.N. Conference on the Human Environment held in Stockholm in June, 1972 was agreement on the creation of a global "Earthwatch" program. This intergovernmental program will monitor certain indicators to assess the health of the global environment. The proposed U.S. Earthwatch Program was enthusiastically supported by the U.S. Government and a large number of Federal agencies are planning to cooperate fully. The Smithsonian has an important role to play which will complement the efforts of other agencies and at the same time call on its unique resources.

ENVIRONMENTAL SCIENCES PROGRAM

1972 Actual.....\$268,000
1973 Estimate.....\$273,000
1974 Estimate.....\$375,000

The Smithsonian Institution has unique capabilities including experienced personnel, the largest collections of plants and animals in the world, with detailed distribution and abundance data. This provides the basis for an effective global environmental monitoring system. The Smithsonian has the capability to measure natural and man-induced variation in the characteristics of solar radiation reaching the earth and the causes of such variations. The Institution is studying, as a function of time, various biological correlates. These studies are facilitated because it has permanent and protected field-research sites in both temperate and tropical zones. In addition, the Smithsonian enjoys particularly favorable relations with its scientific colleagues and institutions in virtually every country of the world.

Environmental Sciences Program activity during FY 1971 and FY 1972 was limited to such priority items as monitoring rates of biological and physical change and using plants and animals as benchmarks and bioindicators in the establishment of environmental standards. The Environmental Sciences Program is a well integrated, inter-bureau plan with specific objectives. In FY 1972 and FY 1973, two Smithsonian Institution owned sites, the Smithsonian Tropical Research Institute and the Chesapeake Bay Center for Environmental Studies, were principally used to carry out these studies. The major objectives of the FY 1973 program are to study selected tropical and temperate areas to understand the factors contributing to the fluctuations in populations. This will be done in the following manner:

- a. by monitoring and evaluating the physical and chemical environments of selected study sites;
- b. by studying the biology and quantitative distribution of principal organisms at these sites; and
- c. by studying the interrelationships of the environment with these organisms and man.

In FY 1974 the marine shallow water and deciduous forest ecosystems studies will be funded at their FY 1973 levels. An additional \$100,000 is sought for the earthwatch program and \$2,000 for necessary pay for term staff.

Earthwatch Program (\$100,000)

For over a century, the Institution has built up a large number of contacts with scientific and environmental organizations around the world. Its researchers are frequently doing field work overseas and its programs, such as the Foreign Currency Program, the Center for Short-Lived Phenomena, and the Smithsonian-Peace Corps Environmental Program, provide it with a global network of environmentally skilled correspondents. Over the same period of time, the Institution has built up the national collections and learned how to extract important environmental information from them. This rapidly growing body of information has attracted an increasing number of requests for data and assistance each year from the Congress, state, federal, and international organizations. The Institution's personnel have also been closely involved in nearly every environmental agreement or treaty in the last several decades.

There is, therefore, a priority that this unique ability to acquire and respond to certain environmental information be organized, updated, analyzed, and rapidly disseminated. To fully utilize the Institutional basis, this will be achieved by following the successful interdisciplinary approach and by building on the basic research of the Environmental Sciences Program.

In FY 1974, the Smithsonian Institution Earthwatch Program will concentrate in the following monitoring fields:

a. Endangered Species (\$30,000) - The Institution will support the aims of the proposed Endangered Species Convention by organizing the information it already has on the status of threatened species, especially those outside the United States. Manuals will be prepared of endangered flora and fauna for easy identification of illegally transported species. The Institution will also call on its past experiences in convening meetings of world experts to recommend improved conservation of certain species. Field surveys will be carried out when vital to ascertain the present status of certain organisms.

b. Fragile Habitats (\$40,000) - The Smithsonian will assist in the evaluation and conservation of certain habitats on which it has already accumulated a great deal of knowledge. These areas will include oceanic islands, tropical forests, and deserts. Field surveys, seminars and publication of results will be employed. It is anticipated that this activity will greatly enhance the Institution's ability to provide assistance in preparing registries of natural areas and for such proposed conventions as the World Heritage Trust.

c. Improved Monitoring Methodology (\$30,000) - There has been an increased rise in requests to the Institution for information on the historical and baseline levels of toxic pollutants. Often this information can only be gained from the examination of museum specimens. Efforts will be made to provide a system of laboratory analysis and rapid results in response to requests from local, state, national, and international organizations. Studies will also be undertaken to improve methods of monitoring. These include the betterment of certain atmospheric measurements, the better utilization of night-vision instruments to allow the monitoring of a variety of organisms on a 24-hour basis, and the improvement of selection of fauna and flora as biological indicators of environmental change.

MAJOR EXHIBITION PROGRAM

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
"World of Living Things" <u>1/</u>		\$525,000		\$249,000		
"Of the People, By the People, For the People" <u>2/</u>				500,000		
"Earthbound Benefits from Flight" <u>3/</u>						500,000
"History Treasure Room" <u>3/</u>						400,000
"Ecological Archeology" <u>4/</u>						<u>50,000</u>
Total operations		\$525,000		\$749,000		\$950,000

1/ "The World of Living Things" is the first of a series of major, permanent exhibitions requested as a Major Exhibition Program and was funded over two years: \$525,000 being appropriated in FY 1972 and \$249,000 in FY 1973. This exhibit was conceived, planned, and partially researched by the Smithsonian prior to the request for funding in FY 1972. The exhibition is an interdisciplinary presentation on environmental awareness and a new departure in Natural History exhibits. The exhibit opens in the Spring, 1973.

2/ "Of the People, By the People, For the People" is a major presentation for the National Museum of History and Technology to explain how American government has been shaped by circumstances, institutions, and hopes that are particularly American. Preliminary concept studies preceded the successful request for funding in FY 1973. The \$500,000 appropriation will support the design, production, and installation of this exhibit which will open to the public in the first half of FY 1974.

3/ The exhibits "Benefits of Flight", for the National Air and Space Museum, and "History Treasure Room", for the National Museum of History and Technology, are being researched and planned during FY 1973 in preparation for budget requests for design, production, and installation funding in FY 1974.

4/ Initial concept studies and program planning will be initiated in FY 1973 for the exhibit "Ecological Archeology", a National Museum of Natural History presentation. This program will require two years effort (\$50,000 in FY 1974 for detailed scripting and design and \$425,000 in FY 1975 for production and installation).

MAJOR EXHIBITION PROGRAM

1972 Actual.....	\$525,000
1973 Estimate.....	\$749,000
1974 Estimate.....	\$950,000

Major exhibitions--requiring new, nonrecurring funds--are permanent and highly significant presentations reflecting new and socially relevant views, many of which result from the studies of Smithsonian scientists, curators, and historians. All of these exhibits will be installed in existing Smithsonian museum buildings; some replacing outdated presentations.

The brochure submitted with the Smithsonian budget requests for FY 1974 identifies and describes three permanent exhibits of unusual timeliness, significance, and public interest. These are titled "Benefits from Flight," (National Air and Space Museum), "Treasures of History" (National Museum of History and Technology) and "Ecological Archeology" (National Museum of Natural History). Funding of \$950,000 is required in FY 1974.

Benefits from Flight is directed at presenting two significant aspects of flight technology: the many and diverse applications of the extensive knowledge generated in the course of developing the systems for air and space flight, and the existing potentials for future applications that will impact on our way of living. This exhibition will be installed in existing exhibit spaces, then relocated to the new National Air and Space Museum building in 1976. The estimated costs: \$500,000.

Treasures of History is conceived as a presentation of the major historical artifacts relating to great Americans and American history brought together from the diverse collections of the National Museum of History and Technology. This is a collection unmatched anywhere in the world with historical value recognizable to the youngest student as well as learned scholars. Estimated costs: \$400,000.

Ecological Archeology presents the most updated view of the science of archeology and is proposed to replace the oldest of the existing permanent exhibitions in the Natural History Building, "Latin American Archeology" installed over 17 years ago. The developments in this scientific discipline are largely the work of the Museum's staff of scholars. The exhibit is planned as a two-year program. Estimated costs for FY 1974 are \$50,000 for planning, design, and preliminary exhibit units for testing. Production and installation are estimated at \$425,000 and will be requested for FY 1975.

ACADEMIC AND EDUCATIONAL PROGRAMS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Higher education <u>1/</u>	4	\$466,000	4	\$469,000	5	\$595,000
Elementary and secondary education <u>2/</u>	10	160,000	14	237,000	17	322,000
Seminars <u>3/</u>	<u>1</u>	<u>27,000</u>	<u>1</u>	<u>23,000</u>	<u>3</u>	<u>72,000</u>
Total operations	15	\$653,000	19	\$729,000	25	\$989,000

1/ Office coordinates the application, selection, and administration, and provides the funding for postdoctoral and predoctoral, and undergraduate fellows and interns in a dozen academic disciplines reflecting Smithsonian interests. Fellows are under the professional supervision and guidance of Institution scientists and historians. Program statistics:

	<u>FY 1972</u>	<u>FY 1973</u>	<u>FY 1974</u>
Postdoctoral fellows	24	25	31
Predocctoral fellows	18	15	19
Visiting research and museum interns	10	11	20
Short-term visitors	15	27	40
Museum study students	5	14	25

2/ Office provides coordination, supervision, and directional development of docent and tour programs involving elementary and secondary school systems and prepares teaching guides, audio-visual aids, and other educational materials directed at pre-college students. Conducts teacher workshops and provides a centralized focus for inquiries concerning various museum projects and activities of interest to school groups. In FY 1972 served 72,000 students in 2,467 scheduled tours; conducted 50 demonstrations in folk musical instruments in school classrooms; trained and administered volunteers for 350 weekend tours and for summer tours in Mall museums; developed printed materials for self-directed tours in each Mall museum for grades kindergarden through third. In FY 1973 will expand tour offerings and increase the number of students served to 78,000; extend additional services to the schools; expand the Bulletin for Schools to six issues (now four) going to 1,000 schools in D.C. area. In FY 1974 will extend services to the Hirshhorn Museum and begin planning for the new National Air and Space Museum; expand production of kit materials for classroom use; and further develop the tour program and educational video cassettes.

3/ Office plans, coordinates, and carries out the Smithsonian's international symposia series and seminars in contemporary topics involving Smithsonian bureaus and offices, federal agencies, and academic institutions. In FY 1972 completed editing of volume resulting from the Fourth International Symposium: The Cultural Drama. In FY 1973 continue planning and development of the Smithsonian's participation in the 1972 annual meeting of the American Association for the Advancement of Science in December 1972 and the Fifth Symposium (commemorating 500th anniversary of Copernicus' birth: The Nature of Scientific Discovery). In FY 1974, editing and final preparation of of proceedings of Fifth Symposium and related papers.

ACADEMIC AND EDUCATIONAL PROGRAMS

1972 Actual.....\$653,000
1973 Estimate.....\$729,000
1974 Estimate.....\$989,000

A major Smithsonian objective is to make its resources for learning available to the formal education community and to the general public. These efforts take the form of programs in higher education, seminar activities, and offerings at the elementary and secondary education level.

The budget request for FY 1974 includes a request for an additional \$251,000 in program development funds and \$9,000 for necessary pay for current staff.

Higher Education (1 position; \$123,000)

Since 1965 the Smithsonian has offered support under its Office of Academic Studies to 108 Ph. D. candidates and 108 postdoctoral investigators to enhance their ability as scholars and teachers through collaboration and study with the Institution's research staff. Over 60 undergraduate and first- and second-year graduate students have been offered the opportunity to consult the Institution's research staff and collections for short periods. These opportunities are extended both to strengthen the research capabilities of the Smithsonian and to make available to the scholarly and scientific community the Institution's specialized resources.

The Institution's capacity to supervise visiting investigators has expanded greatly over the last few years, but the number of stipends available has remained about the same. The shortage of fellowships is keenly felt both by the Institution's research staff and by the nation's scholarly and scientific community. This community depends upon the Smithsonian to offer advanced training to students and to young scientists and scholars pursuing careers in disciplines where the Institution has unique resources for their study and research. Smithsonian research training augments formal academic studies. Its effectiveness derives from close cooperation with the nation's universities and colleges. They welcome opportunities for their students to receive specialized Smithsonian training which their own resources cannot provide.

Visiting investigators bring an infusion of the ideas and new research insights which provide the fundamental vitality of a major national research center. Smithsonian staff members report an increasing need for the benefits afforded by the fellowship program. Each year many more highly meritorious applications are received than can be supported. Only 15 Ph. D. candidates can be supported, yet 230 staff members want to advise at least one Ph. D. candidate each year. Only 25 postdoctoral Fellowships can be offered, while 225 staff members want to advise a postdoctoral investigator each year. The shortage of financial support is especially acute in investigations of ecological problems and the study of contributions of American technology and science.

It is significant that a growing number of East European scholars and scientists seek advanced research training at the Smithsonian, creating an exciting opportunity to develop regular contact and communication.

To insure the Smithsonian's ability to maintain its contribution to quality training in scarce specialties the higher education program should be increased to serve at least twice as many Ph. D. candidates and postdoctoral

investigators as is now possible. To begin to correct this shortage an increase for FY 1974 is requested in the amount of \$100,000 for stipends. This will fund an additional 10 pre and postdoctoral fellowships.

An additional \$10,000 is requested to support younger graduate students. It is crucial to these students who have not yet begun their dissertations that they be offered the opportunity to consult the Smithsonian's research staff and the national collections. And \$5,000 additional are requested to meet the proliferating requests of scholars and scientists for smaller financial awards to support short visits to the Smithsonian to use the resources of the Institution in their research. One supporting clerical position is requested (\$8,000).

Elementary and Secondary Education (3 positions; \$80,000)

Elementary and secondary education activity includes the popular escorted lesson tours for school groups, the preparation of teaching guides, demonstrations, audio-visual materials, and other services. Public use of the educational facilities of the Institution is growing rapidly at all levels of training.

One new staff associate position is needed to provide a close working relationship with the staff of the National Air and Space Museum in the support of the docent program for that museum. It will be timely as well for the Office of Elementary and Secondary Education to become engaged in the expanding development of educational offerings in the aerospace subject areas preparatory to the opening of the new Air and Space Museum. The other new staff associate position will be utilized to fill the need for a separate supervisory function to effect close coordination of the developing kit, video tape, filmstrip, and demonstration materials in applying these materials to both the docent program and outreach programs to the schools. An additional tour scheduler position will be required to handle the expanded activity in existing museums and galleries and in the new Hirshhorn Museum (\$31,000).

With additional funding for docent training and the preparation of hall guides and other teaching materials, the school tour program can be expanded.

	<u>FY 1972</u>	<u>FY 1973</u>	<u>FY 1974</u>
Docents	154	200	250
Tours	2,467	2,600	2,700
Students served	72,000	78,000	82,000
Subject offerings	26	30	36

New tours will be developed in History and Technology around exhibits being planned for the Bicentennial celebrations and tours will be offered in Natural History with the opening of the new exhibits on Ecology (\$4,000).

Outreach programs will be expanded to answer the need for curriculum oriented materials applicable for classroom use in the schools of the local area. For teachers to become familiar with the use of such materials and for first-hand awareness of the offerings within the museums, workshops involving teachers, staff, and docents will be conducted. Opportunities will be afforded to students in schools of education to have assignments on a part-time internship basis to study and observe on-going museum education activity.

An amount of \$45,000 is requested to implement the planning begun in FY 1973 for the development of the video cassette for educational use. These funds will be used to form a cassette development unit to prepare scripts, develop video tape footage, and perform other development work. It is anticipated that actual production and marketing will be done by private industry under an agreement with the Institution. The planned result is a series of cassettes on subject areas of Smithsonian competence which schools can employ as supplementary course material and the general public as informative and entertaining reference works for home use.

Seminars (2 positions; \$48,000)

The Office of Seminars is responsible for the Smithsonian's International Symposia Series, its biennial program of public activities centering on a single theme of contemporary importance, from which is published the collected original papers presented and other relevant material. Regular interdisciplinary lecture series are held annually, often in cooperation with other institutions of learning. The office serves as a resource facility to universities, other organizations, and other branches of the government. In addition, the office coordinates special projects at the request of the Secretary and Assistant Secretaries.

Since the inception of the International Symposia Series in 1965, the Smithsonian's educational activities have expanded broadly to include every facet of the communication of knowledge, with special emphasis on the museum as a learning place. In order to exploit the often-unique resources of the Institution to the fullest in these ways, it is essential to have an adequate staff and support funds to develop and strengthen programs arising often in response to public demand. Use of the educational facilities of the Smithsonian has grown rapidly in every kind of scholarship, and the office serves increasingly as a resource facility to universities and other establishments. The new positions of director of seminars and program specialist with funds for office expenses and program development will enable the Institution to carry out these responsibilities more fully and to strengthen its effectiveness in its educational mandate. The office's program goals directly reflect this role: providing forums where scientists and scholars meet with non-specialists to discuss matters of common interest and concern, particularly implications of new knowledge for public education (\$48,000).

SMITHSONIAN RESEARCH AWARDS PROGRAM

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Research awards <u>1/</u>		\$425, 000		\$450, 000		\$550, 000

1/ From 1966 through 1973, 329 proposals were funded through the Research Awards Program. There have been more than 200 publications directly related to the research accomplished under the program. These research projects are for very carefully described objectives, usually limited in time, involving some travel, sometimes special equipment, sometimes short-term technical assistance, and are funded in competition with other such proposals. Increased funding will help fund multi-year awards for better stability, continuity, and planning of research, and will help to combat the higher costs of basic research brought about by inflation in the costs of laboratory supplies, equipment, and service.

SMITHSONIAN RESEARCH AWARDS PROGRAM

1972 Actual.....	\$425,000
1973 Estimate.....	\$450,000
1974 Estimate.....	\$550,000

Prior to FY 1966, the Smithsonian Institution received funds from the National Science Foundation (NSF) for research projects of individual staff members. In 1964, the Congress prohibited the NSF from making grants for scientific research to other Government agencies. The NSF instituted a further limitation that it would no longer make grants to any agency or institution receiving direct Federal appropriations. This limitation is reaffirmed in the NSF Circular No. 108, dated July 7, 1972 --" ----- it presently is Foundation policy not to encourage research proposals from Federal agencies -----." The Research Awards Program was begun in FY 1966 by an appropriation of \$350,000 to the Smithsonian Institution for the purpose of financing new or continuing research projects formerly eligible for support from NSF. Funding for the program increased to \$400,000 in FY 1967, \$425,000 in FY 1972, and \$450,000 in FY 1973.

Proposals are submitted each year by members of the Smithsonian Institution staff to support new and innovative research. All proposals have undergone a careful scientific or scholarly review in their respective bureaus before they are reviewed by an Advisory Committee of scientists from outside the Institution. Projects are selected on the basis of their showing an imaginative and exciting approach to research and scholarship efforts that could not normally be carried out with regularly budgeted departmental funds.

For FY 1974, an increase of \$100,000 is requested to help fund multi-year awards and offset inflation in the cost of supplies, materials, and other items. There are many proposals now being submitted which demonstrate research capabilities deserving long-term support.

In FY 1973, members of the Smithsonian staff again submitted proposals for funding up to three years in order to provide for better stability, continuity, and planning of research. There were 75 proposals received for FY 1973 amounting to \$1,685,648. There were 18 multi-year grants approved in FY 1971 and FY 1972 for which funds in the amount of \$282,308 were committed.

Including the multi-year awards, there were 39 awards made in the amount of \$450,000 in FY 1973. Thirty-six proposals were rejected. Many were deemed worthy, but funds were not sufficient to fund them.

The Research Awards Program is intended to cope with a serious problem confronting many Smithsonian scientists and scholars who wish to undertake non-routine fundamental research of the kind normally undertaken by university researchers but which cannot be supported from the regular budgets of their parent bureaus. The large number of worthwhile proposals that were not funded in FY 1973, and in previous years, is of concern to the Institution. This concern is based on the fact that the work supported by the Research Awards Program is often the best of the Institution's productivity and the reason for acquiring professional staff of the highest competence and imagination. If the Smithsonian cannot provide this kind of support, it might not attract high caliber persons, nor retain them.

Further, the program serves as an important means whereby our researchers may engage in collaborative field research with colleagues located in other institutions. Many opportunities for participation in expeditions and other field projects would be lost were it not for the Research Awards Program providing modest, but essential, research assistance. The problem affects all the research bureaus.

OFFICE OF THE SECRETARY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Program direction and administration <u>1</u> /	21	\$375,000	22	\$396,000	25	\$471,000
Curation of Smithsonian Institution building <u>2</u> /	<u>1</u>	<u>16,000</u>	<u>2</u>	<u>29,000</u>	<u>3</u>	<u>49,000</u>
Total operations	22	\$391,000	24	\$425,000	28	\$520,000

1/ Responsible for planning, implementing and reviewing the programs of all Smithsonian operations.

2/ During FY 1972 a furniture restorer was transferred from the Office of Exhibits to the Smithsonian Building to restore antique furniture for use in this building.

During FY 1973 a curator has been employed to assist in the acquisition and use of antique furniture, furnishings and fixtures. During FY 1974 a secretary is requested to assist the curator.

OFFICE OF THE SECRETARY

1972 Actual.....	\$391,000
1973 Estimate.....	\$425,000
1974 Estimate.....	\$520,000

The Office of the Secretary is responsible for planning, implementing and reviewing the programs of all Smithsonian operations.

The Office of the Secretary is composed of the immediate office of the Secretary, the Secretary's Files, the Office of the Assistant Secretary, and the Curator of the Smithsonian Institution Building.

A program increase of \$90,000 is sought for FY 1974 and \$5,000 for necessary pay.

The Secretary, Assistant Secretary^{US}, Director of Support Activities, Treasurer and General Counsel constitute the internal "Executive Committee". They meet weekly to review progress in various areas of management concern. This group is beginning a major effort to identify, define, and resolve significant operating issues related to all museum, gallery, and support operations in the Smithsonian complex. These issues relate both to the Institution's current operations and to its future growth and development.

Two program assistants and a secretary (\$70,000) in the Office of The Assistant Secretary are needed to provide the Executive Committee with a small working group to research problems and issues prior to their presentation before the Secretary and the Executive Committee. This core group will also be responsible for seeing that decisions of the Executive Committee are implemented by the various offices and bureaus.

The Smithsonian Institution Building has many offices and galleries that have been restored as nearly as possible with furnishings and architectural details of the 19th Century. A curator was employed in FY 1973 to be responsible for the acquisition of additional authentic pieces and to process and administer loans of paintings and other art. A secretary (\$10,000) is requested to assist the curator in the daily work. Funds are also requested to establish a purchase fund to acquire additional furniture, furnishings and fixtures.

OFFICE OF THE GENERAL COUNSEL

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Legal services and legislative analysis <u>1/</u>	9	\$213,000	10	\$192,000	12	\$250,000

1/ Includes legal research, counsel, and legislative analysis on a broad range of governmental and private matters.

OFFICE OF THE GENERAL COUNSEL

1972 Actual.....	\$213,000
1973 Estimate.....	\$192,000
1974 Estimate.....	\$250,000

The Office of the General Counsel handles the legal matters of the forty different line programs and 10 staff offices of the Institution, and at the same time, advises the Secretary and the Board of Regents on the administration of the Institution as a whole. The legal problems of the Institution include those arising from the operations of a private, university-like, charitable corporation, as well as those common to Government organizations and include: the limitations and obligations of Smithsonian operations in relation to the functions, authorities, and regulations of other Government entities; its legislative histories and authorities and those of its offices and bureaus; the use of trust funds; litigation in which the Institution is a party; application of judicial decisions and Executive Branch directives and regulations to its administration; title to accessions by gift, loan, transfer, or purchase; proposed contracts and agreements; tort claims and settlements; excise, sales, and gift taxes, deductions, and exemptions; patents; copyrights; and many areas of international law.

The FY 1974 budget contains a request for \$52,000 for additional legal and legislative analysis staff and office support costs. A further amount of \$6,000 is required for necessary pay.

An increasingly important and demanding function of the Counsel's Office is the analysis of Congressional activities and legislation in relation to Smithsonian programs and administration. The development of new areas of the law, both substantive and procedural (e.g. Environmental Law, Occupational Safety and Health Standards, Freedom of Information Act), and the complexity and volume of Congressional inquiries place a premium on having one person fully conversant with Congressional protocol, legislative procedures, and the full range of Smithsonian programs, who would specialize in these matters and serve as a focal point for all Congressional related inquiries and referrals. It is therefore proposed to establish a legislative unit within the Office consisting of one senior legislative analyst and one secretary at a cost of \$39,000.

To enable the Office to carry out in-depth legal research relevant to the origin, development, and legal status of several areas of Smithsonian administration, and for peak periods created by litigation or administrative hearings, the addition of one part-time attorney is sought, with the corresponding use of part-time secretarial assistance. An amount of \$10,000 is requested for this purpose. An increase of \$3,000 in support costs, for library materials, for the continued legal education of the legal staff through the attendance of conferences, and for office equipment also is requested.

OFFICE OF THE TREASURER

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Administration <u>1/</u>	2	\$ 48,000	2	\$50,000	2	\$ 51,000
Programming and budget <u>2/</u>	5	94,000	6	107,000	6	110,000
Accounting <u>3/</u>	<u>21</u>	<u>505,000</u>	<u>25</u>	<u>597,000</u>	<u>28</u>	<u>670,000</u>
Total operations	28	\$647,000	33	\$754,000	36	\$831,000

1/ Treasurer's office provides overall direction in financial management for the Institution's federal and non-federal resources including appropriated funds, gifts, endowments, grants, and contracts. Functions include investment review, cash management, management of income-producing activities, such as the Museum Shops and the Belmont Conference Center, and supervision of planning, budgeting, and accounting activities.

2/ Provides planning, programming, and budget formulation, execution, and review for federal appropriations, restricted and unrestricted funds and special projects. Includes operating and construction budgets for some 175 bureaus, offices, divisions, special projects, and other activities involving approximately \$100 million.

3/ Services provided encompass Federal funding with several hundred cost centers, and private funding with over 1,000 endowments, restricted, unrestricted and grant and contract funds. Functions of this office are (1) developing and maintaining financial accounting and payroll systems, (2) financial analyses and reporting, (3) operations to include payroll, voucher auditing and processing, cash receiving and disbursing, funds control, certification of payments, and data processing control, and, (4) beginning with FY 1974, cost accounting for activities such as the Buildings Management Department and the Exhibits Office. The Accounting Division is comprised of an almost equal number of Federal and Private employees.

OFFICE OF THE TREASURER

1972 Actual.....	\$647,000
1973 Estimate.....	\$754,000
1974 Estimate.....	\$831,000

This office provides financial management assistance and technical services to the Smithsonian. It is composed of the Treasurer's immediate Office, the Office of Programming and Budget, and the Accounting Division. Financial planning, budgeting, accounting, contracts administration, and reporting are the responsibilities of these several units.

An increase of \$65,000 is requested to finance higher postal costs, the cost of workmen's compensation, and to provide for ~~three~~ additional staff in the Accounting Division. An amount of \$12,000 is needed for necessary pay.

Postage Indicia (\$20,000)

Funding of the Institution's postage indicia requirements are provided centrally from the Office of the Treasurer. An additional \$30,000 are required to meet the additional cost of postage. In FY 1972 postage was \$200,000. Increased use has resulted in this cost being \$220,000 in FY 1973. In FY 1974 the cost is expected to be \$240,000.

Workmen's Compensation (\$20,000)

The Department of Labor has billed the Smithsonian Institution \$92,581 for compensation that was paid to employees in FY 1972. This bill has to be paid to the Department of Labor in FY 1974 and is \$20,000 more than is currently being paid.

Accounting (3 positions; \$25,000)

The volume of financial and accounting transactions has increased substantially over the past two years, partly as a result of increased Federal funding and partly from the addition of full accounting and payroll services for the National Zoological Park, Woodrow Wilson International Center for Scholars, and the Smithsonian Tropical Research Institute.

During FY 1972, financial transactions exclusive of payroll resulted in over 40,000 payments, an increase of 20 percent over the preceding year. Cash receipts to Private funds increased by more than 20 percent over FY 1971, resulting in 40,000 items processed and accounted for in FY 1972. Payroll accounts, Federal and private rolls, increased from 3,300 in FY 1971 to 3,600 in FY 1972. Telephone and personal inquiries received and answered by this office exceeded 60,000 during FY 1972. Monthly reports are produced and reflect financial data in various forms of classification and presentation and are furnished recipients of Federal and private budgets as well as central management.

For FY 1973, the workload of this office will continue to increase reflecting the volume of transactions and the development of a restatement of accounting principles and standards and redesign of the accounting system to meet the approval requirements of the Comptroller General.

In FY 1974, the office requires a cost accountant and a technician to implement the redesigned accounting system and to develop centralized cost accounting for activities such as the Buildings Management Department and the Office of Exhibits. One additional payroll position is needed to convert a current private roll job in order to develop a more equitable balance between Federal and private employees in relation to the workload involved (\$25,000).

OFFICE OF PERSONNEL ADMINISTRATION

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Consultant services <u>1/</u>	7	\$186,000	7	\$157,000	9	\$209,000
Career development <u>2/</u>	3	48,000	4	71,000	4	79,000
Administration and direction <u>3/</u>	3	60,000	3	70,000	3	73,000
Technical, administrative, and clerical support <u>4/</u>	8	62,000	8	93,000	10	120,000
Health Services <u>5/</u>	5	47,000	4	53,000	5	64,000
Recruitment and placement <u>6/</u>	2	33,000	4	46,000	4	48,000
Staff services <u>7/</u>	<u>1</u>	<u>35,000</u>	<u>2</u>	<u>44,000</u>	<u>2</u>	<u>46,000</u>
Total operations	29	\$471,000	32	\$534,000	37	\$639,000

1/ In FY 1972 this area conducted audits, negotiated contracts, and assisted in the Locality Wage Pay Survey. In FY 1973 classification surveys will be made and a personnel evaluation system established. In FY 1974, the Office will emphasize personnel management effectiveness evaluation, position management, labor-management relations, and communications program planning and development.

2/ In FY 1972 the training lab opened to provide skills training. In FY 1973 an upward mobility program and an orientation handbook will be developed. In FY 1974 the implementation of the executive development program will take place.

3/ In FY 1972 the emphasis was placed on assistance to the Union and Management. In the coming years, the Office will work to solve personnel problems.

4/ In FY 1972 there were more than 80,000 actions processed. FY 1973 and 1974 work will emphasize implementation of the new Federal Personnel Management Information System.

5/ In FY 1972 the Health Services treated some 10,000 people and gave approximately 800 immunizations. In FY 1973 and 1974 action will be taken to implement the recent Public Health Service report.

6/ In FY 1972 this area filled approximately 500 jobs and developed a skills file for employee development. In FY 1973 the development of a Recruitment Brochure is planned and a revised Merit Promotion Program will be published. Future plans include an improved recruiting effort by going out to more colleges, universities, and technical schools to find qualified job applicants.

7/ In FY 1972 this function was engaged in improving labor-management relations, streamlining the discipline program, doing individual projects related to equal employment opportunity, average grade rollback, and safety and health programs. In FY 1973 the supervisory handbook will be published, management proposals will be developed, and the manpower program will be revised. Future plans are to concentrate on position classification, internal operating procedures, and working with the unions and management.

OFFICE OF PERSONNEL ADMINISTRATION

1972 Actual.....\$471,000
1973 Estimate.....\$534,000
1974 Estimate.....\$639,000

The Office of Personnel Administration has responsibility for personnel administration and the operation of health services. It helps to formulate policy over a wide range of activities for manpower planning and managerial development, through employee training, performance evaluation, and labor relations. These programs generally fall into seven broad categories: consultant services, career development, administration and direction, technical, clerical and administrative support, health services, recruitment and placement, and staff services.

The FY 1974 budget contains a request for an additional \$100,000 for personnel management and health services and \$5,000 for necessary pay.

The Office of Personnel Administration requests two personnel management specialists so that key strides can be made in such program areas as personnel management effectiveness evaluation and position management. The Smithsonian has some 2,560 employees. In FY 1974, this number will increase. Currently, there is one personnel management specialist to service every 115 employees. This does not compare with most agencies where there is one personnel person to service each 80 employees. Two clerk-typists are requested to aid the two personnel management specialists with regard to clerical duties. The additional costs of these employees will be \$57,000.

One additional nurse is requested for the health units. These units treat some 10,000 people per year. This is a sizeable load for the present staff of four nurses. This position will also enable the health units to make many improvements mentioned in the report that the Public Health Survey made in FY 1972. Cost will be \$10,000.

An amount of \$33,000 will be used for typewriters and a flexowriter that will be used to answer letters (employment inquiries) at a greater speed. This machine will be invaluable since OPA handles approximately 80,000 actions per year most of which are employment inquiries. This additional money will also be used for training, computer service, executive development, and maintenance of the health facilities.

OFFICE OF AUDITS

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Internal auditing <u>1</u> /	5	\$116,000	6	\$107,000	8	\$139,000

1/ Reporting directly to the Office of the Assistant Secretary, audits are conducted by the staff. Recommendations made in these reports result in improved management procedures and controls, sometimes pointing to potential dollar savings.

OFFICE OF AUDITS

1972 Actual	.....	\$116,000
1973 Estimate	....	107,000
1974 Estimate	....	139,000

The Office of Audits was begun in fiscal year 1967. The Office of Audits is responsible for the internal auditing procedures of financial and management methods.

A program increase of \$30,000 is sought for fiscal year 1974. In addition \$2,000 is required for necessary pay.

With more than forty operating units and several large staff offices, there is a large volume of auditing to be done. Since this office was established several important audits have been conducted, recommendations made and the improved management procedures and controls implemented.

With the current staff, ten audit reports are expected to be worked on this fiscal year. These audit reports range from a review of the Smithsonian Institution payroll system to close-out audits of foreign currency program grants. Work which should be done this year, but which will have to await additional auditors are in the Buildings Management Department and the National Zoological Park.

Two additional auditors in FY 1974 will help the existing staff to conduct additional audits each year, so that the backlog can be reduced more quickly. Also this will provide a small allowance of time for the existing staff to make selected re-audits to see that corrections in certain critical problem areas which have already been made are still being effectively implemented.

OFFICE OF EQUAL EMPLOYMENT OPPORTUNITY

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
To administer an equal opportunity program <u>1/</u>	3	\$64,000	3	\$63,000	6	\$121,000

1/ Conducts a positive action program which will continue to provide true equality
in all Smithsonian employment practices.

OFFICE OF EQUAL EMPLOYMENT OPPORTUNITY

1972 Actual.....\$ 64,000
1973 Estimate.....\$ 63,000
1974 Estimate.....\$121,000

The Equal Employment Opportunity Program, established by Executive Order 11246, requires the Smithsonian to conduct a positive action program which will continue to provide true equality in all Smithsonian employment practices. More recently enacted to implement this program is Public Law 92-261, "Equal Employment Opportunity Act of 1972".

A program increase of \$57,000 is in the FY 1974 budget request. An additional \$1,000 is sought for necessary pay.

The Office of Equal Employment Opportunity has been designated by the Secretary of the Institution to develop and implement a program to guide the Smithsonian Institution's efforts to provide equality of opportunity in all official actions. Evaluation of the Smithsonian Institution's Equal Opportunity program is made and recommendations forwarded as are needed to improve the employment activity and to eliminate discriminatory practices.

A new Plan of Act will provide better utilization of minority skills, improve recruitment practices, and aid in the development of programs for minority and women career advancement, including methods for acquiring specific educational and experience requirements.

Additional funding in the amount of \$57,000 is requested to add a Federal Women's Program Coordinator, a Civil Rights Program Specialist and a secretary (\$42,000) and funds for travel, training, supplies and equipment (\$15,000). An amount of \$1,000 for necessary pay is needed.

A new Smithsonian Women's Council has been established which will serve as a women's advisory body to the Director, Equal Employment Officer, and provide federal and non-federal women employees of the Smithsonian Institution a forum for the expression of mutual interests. The Council will facilitate communication between the women of the Institution and management by the exchange of information and ideas. The Federal Women's Program Coordinator will develop programs for the improvement of women's career advancement opportunities and will work with the Women's Council.

The Civil Rights Program Specialist and secretary will work to develop opportunities for minority employees of the Smithsonian and oversee the supervision of contracts and grants to insure that the recipients practice equal opportunity employment.

The office is responsible for keeping the Secretary informed on all actions taken and/or are necessary to assure equality of opportunity in employment and in all policies and practices which are engaged in or initiated by the Institution.

Evaluations and preparations of statistical information are formulated as required by law and the Secretary. Prompt investigation is made of all complaints of discrimination.

Funds are needed for training of equal employment counselors. These counselors are located in the many offices and bureaus of the Smithsonian. They will be available to any employee wishing to be heard.

PHOTOGRAPHIC SERVICES DIVISION

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Assignment (photography) <u>1/</u>	6	\$110,000	7	\$167,000	9	\$202,000
Laboratory processing <u>2/</u>	14	232,000	15	290,000	17	303,000
Library cataloging and captioning <u>3/</u>	<u>2</u>	<u>26,000</u>	<u>5</u>	<u>63,000</u>	<u>8</u>	<u>95,000</u>
Total operations	22	\$368,000	27	\$520,000	34	\$600,000

1/ The Assignment Branch experienced an approximate 30 percent increase in workload in FY 1972 over FY 1971, primarily in microfilming of rare documents, and photography of museum collections in color. Plans for FY 1973 include the addition of a full time microfilm photographer to begin the microfilming of 3 million valuable accession records for the Registrar and Archivist. Projected plans for FY 1974 will be to create a separate microfilm unit to finish the accession records and to begin the task of filming all Smithsonian records - present estimate - 12 million units. Other plans for 1974 will be the establishment of a comprehensive scientific and technical photographic unit in the Museum of Natural History.

2/ The Laboratory Branch increased print production by 40 percent and copy negative production by 280 percent in FY 1972 over FY 1971. Delivered 24,000 prints to the Bureau of Indian Affairs. Plans for FY 1973 include the addition of a laboratory technician experienced in the exact duplication of color slides and viewgraphs, and the purchase of equipment for this purpose. Projected plans for FY 1974 emphasize the relocation of the Laboratory Branch to more efficient and expanded quarters off-the-Mall.

3/ The Library Branch made preliminary studies on how to handle the estimated 1 million valuable negatives, some dating back to the 1850s, owned by the Institution. In FY 1973 ~~three~~ employees will be added to begin cataloging and captioning for computer input and eventual subject catalogs. Additional employees in FY 1974 will accelerate the captioning, indexing, and cataloging functions and begin restoration of thousands of valuable glass plate negatives.

PHOTOGRAPHIC SERVICES DIVISION

1972 Actual.....	\$368,000
1973 Estimate.....	\$520,000
1974 Estimate.....	\$600,000

The Photographic Services Division was formed to coordinate photographic activities in the Institution and to exercise direction over the application of procedures and techniques. The Division is organized into three operating branches. The Assignment Branch takes photographs as requested by the research and curatorial staff and the public. The Laboratory Branch processes film, copy, and makes photographic prints and transparencies. The Library Branch captions, indexes, catalogs, restores, and retrieves negatives and prints produced by the Assignment and Laboratory Branches and from private sources outside the Institution. The work is constantly under public and scholarly scrutiny, and is an integral part of the Smithsonian Institution, in that it provides to the general public, either directly or through the many National publications, excellent custom photographs of the thousands of rare objects and specimens held by the Institution.

The FY 1974 budget contains a request for an additional \$73,000 to meet staff and public requests for photographs and to accelerate the cataloging of negatives and prints. An additional \$7,000 is required for necessary pay.

Photography and Processing (4 positions; \$43,000)

Four additional photographer and technician positions (\$43,000) are requested in the FY 1974 budget for studio and field photography and processing. This additional staff, with planned redirection of base resources, will permit the Division to accomplish the following projects. A quality control position will be added to assure that customers receive the best possible product and that laboratory standards and procedures are established and maintained which, in turn, will increase production efficiency, allow less skilled personnel to be employed, and reduce the cost of supplies and materials. In FY 1974, a well-staffed microfilm unit should be established to make faster progress on filming an estimated 12 million units in the Institution of which three million museum accession and archival records are the most urgent. The division plans to increase color photography, including color slide sets for education purposes, to satisfy staff and public requests. It is planned also to establish in the National Museum of Natural History an improved scientific and technical photographic capability to satisfy the requirements of research publications and to relieve scientific personnel of photographic duties. New projects and programs, such as the Hirshhorn Museum and Sculpture Garden, will be given photographic assistance and a generally increasing workload in existing programs will be met. In FY 1972 approximately 7,000 requests were handled involving 1,440 photography assignments and the production of 27,500 negatives, 156,000 prints produced inhouse, and 20,000 color prints and transparencies purchased commercially. This workload, which was accomplished at a cost of about \$340,000, would have cost \$480,000 to obtain commercially.

Cataloging and Captioning (3 positions; \$30,000)

The Library Section was created in July 1971. Basic plans for captioning, indexing, editing, restoration, filing, retrieval, and cataloging

of the Smithsonian's one million negative resources have been made. All negatives in the Natural History and Arts and Industries buildings have been relocated to an air-conditioned and humidified negative filing room in the History and Technology Building built especially for that purpose. The consolidation of the negative files and laboratory wet processes into one area has contributed substantially to an approximate 50 percent increase in production. A comprehensive study was made by the Management Analysis Office to determine resources necessary to accomplish the goal of locating and retrieving any of the one million negatives by subject. Work measurement studies determined the need for a complement of six persons working eight years in order to catch up and keep current on the one million negatives. In addition, many of these negatives are very old, some are glass plates and evidently were subject to high temperatures for a long period of time or have been improperly processed. Some are sticking together (were not individually jacketed), many are discolored with emulsion shriveled, cracked, and peeling. These require restoration to avoid total loss.

In FY 1972 the cataloging and captioning staff consisted of two persons. Three more will be added in FY 1973. An additional three are requested in the FY 1974 budget for a total staff of eight as recommended by the management survey. It is anticipated that this group would be able to caption all new negatives (some 30,000), caption all old negatives that have been pulled for orders (some 90,000), and caption some 20,000 negatives that have been restored by the photographers and technicians. Simultaneously, caption information will be prepared for computer processing for the development of a catalog of photograph resources (\$30,000).

INFORMATION SYSTEMS DIVISION

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Scientific applications <u>1/</u>	2	\$ 40,000	3	\$ 60,000	4	\$ 82,000
Information storage & indexing <u>2/</u>	2	40,000	3	59,000	5	103,000
Management systems <u>3/</u>	3	63,000	3	65,000	3	66,000
Software systems & maintenance <u>4/</u>	2	40,000	2	42,000	3	62,000
Operations & keypunch	3	39,000	4	49,000	5	60,000
Administration	<u>2</u>	<u>45,000</u>	<u>2</u>	<u>47,000</u>	<u>2</u>	<u>48,000</u>
Total operations	14	\$267,000	17	\$322,000	22	\$421,000

1/ In FY 1972 special mathematical/statistical programs and analyses were developed. Computer generated maps for research and publication purposes were provided. Software for computer graphical output was obtained. In FY 1973 a user's manual will be written to aid researchers in the use of the computer facility and programming classes organized. Cooperative training will be established with Pennsylvania State University for predoctoral students in statistical ecology. Effort will continue in statistical analysis and development of multivariate techniques. In 1974 mathematical and statistical analysis and the development of analytical techniques and time-share computing capabilities will be emphasized.

2/ In FY 1972 systems design and programming continued on the Smithsonian's Collection Management System (SELGEM). Data pertaining to 25 national collections (111,000 records) were entered into the system. In 1973 data will be entered from seven additional natural history areas (approximately 250,000 records of information). In 1974 SELGEM will be expanded to provide a museum-wide inventory system for the National Museum of History and Technology. Additional systems development will be done for the Hirshhorn Museum.

3/ In FY 1972 systems design, programming, and related services were provided to the National Air and Space Museum to assist in producing a Directory of United States Aerospace Exhibits. Work on the payroll-personnel system continued with additional products such as an automated Smithsonian telephone directory, personnel data statistics required by the Civil Service Commission, and Institutional and departmental leave statistics. In 1973 personnel development and training data required by the CSC will be developed. Optical character recognition and mark sensing devices will be evaluated to eliminate manual capturing of information. In 1974 work will start on systems design to develop a total supply-accounting system.

4/ In FY 1972 the Exhibition Index for the National Portrait Gallery was completed for staff reference and public use at the information desks. Information on 4,700 items in the National Collection of Fine Arts was converted to automated form. In 1973 the Portrait Gallery Catalog will be converted to computer-output-microfiche instead of hard copy printed reports. Techniques will be tested to convert collection data from magnetic tape directly to photocomposition devices in producing catalogs and indexing listings. In 1974 systems design and programming will be initiated for the Smithsonian Oceanographic Sorting Center to handle their inventory of ocean bottom photographs and for the National Zoo for handling animal records and for work planning and control.

INFORMATION SYSTEMS DIVISION

1972 Actual.....\$267,000
1973 Estimate.....\$322,000
1974 Estimate.....\$421,000

The Information Systems Division was established in 1966 so that the Institution could take advantage of computer technology. Computer specialists, mathematicians, and support personnel work with curators, historians, scientists, and management personnel to apply mathematical techniques to research problems and to develop automated administrative and collection management systems. The Division is comprised of an information retrieval and indexing section, a mathematical computation section, a software systems and maintenance section, a management information systems section, and an operations/keypunch section.

In recent years, a better understanding of the computer's potential in relation to the programs of the museums, research areas, and galleries has evolved and progress has been achieved. Presently scientific and collections management computer programs are being developed so that they can be utilized in several areas with minor modifications to reduce development costs. The Division will expend approximately 75 percent of its FY 1973 resources for collections management and scientific research support. A continued effort is required for the administrative and central support activities, but the main emphasis in FY 1974 will be to continue support in the collections management and scientific research areas.

The FY 1973 level of funding provides for a director, eight computer specialists, three mathematicians, one control clerk, three keypunch operators and one ADP technician. In FY 1973 more than 20 major bureaus or organizations indicated the need for new or on-going data processing support. The projection for FY 1974 is greater. Requirements can be for computer specialists and/or mathematicians depending upon the project. The Division maintains a computer program library containing 350 active programs used for various Institutional requirements. About 50 percent of the present staff of computer specialists and mathematicians are required to maintain or enhance these programs to keep on-going applications viable. Additional staff and funds are required if the Smithsonian is to meet the additional workload requirements that have been identified and expand the use of the computer as a major tool for collections management and research.

A program increase of \$90,000 is requested for additional personnel and support funds. An additional \$9,000 is required for necessary pay.

Scientific Applications (1 position; \$20,000)

The Scientific Applications Section is currently serving over 100 researchers throughout the Institution, including the Museum of Natural History, Conservation Analytical Laboratory, National Zoological Park, Chesapeake Bay Center, National Portrait Gallery, Freer Gallery, Radiation Biology Laboratory, Office of Environmental Sciences, and the Office of American Studies. It provides statistical analysis assistance, designs mathematical models of research experiments, and researches and develops new techniques to analyze historical, biological, chemical, and geological data. Mathematical models and computer programs that have been developed are being used by the National Institutes of Health, Georgetown University, Brookhaven National Labs, and other organizations.

Significant ongoing projects include primate population dynamics research for the Division of Mammals to develop more effective cropping methods for medical research; a study for the Department of Anthropology to isolate skeletal disease patterns in different populations; a study for the Office of Environmental Sciences to explore the African antelope herd composition behavior patterns and extinction problems; and development of a multichemical model of tracing the manufacturing process of European medieval cathedral glass by analyzing neutron activation data of glass samples. Some 30 major projects were completed this past year. A current backlog of 20 increasingly sophisticated projects exists. An additional mathematician with support funds is required for FY 1974.

Information Storage and Indexing Section (2 positions; \$42,000)

The Smithsonian's Collection Management System (SELGEM) developed for automated retrieval and indexing of data pertaining to the national collections will be further developed to include the areas of echinoderms, bryozoa, rocks, anthropological archives, marine birds, and fish specimens for natural history applications. Information that was formerly virtually impossible to obtain can now be made available with little effort once in this mode. The system also allows for an economical mode of exchanging data via magnetic tape without physically transporting the specimen or visiting other locations. Through an exchange program our own national collections can be enhanced. In addition, computer programs that have been developed for collections management are being made available to other Institutions which want to automate their collections but lack funds. The results are twofold: smaller institutions are not burdened with initial development costs and there is growing compatibility in collections management between institutions.

The Division also will work in conjunction with the National Museum of History and Technology to implement a museum-wide inventory system covering all aspects of collections management (acquisitioning, inventory, cataloging, retrieving, and loan processing). Expected results will provide for catalogs, cross-referencing indices by categories for researchers and curators, better inventory control, and a future vehicle for responding to non-technical queries, thus relieving the professional staff. A system for the Hirshhorn Museum collection will be developed further. It will allow for the cataloging, indexing, and retrieval of data concerning sculpture and art which will be the research file used by curators and scholars. To support these major areas of effort and others two additional computer specialists will be required in FY 1974.

Software Systems and Maintenance Section (1 position; \$19,000)

At the National Zoo the method of handling animal data has to be improved. Initial effort will be given to automating medical records which are considered most critical, followed by feeding, behavioral, and birth records. This data will be used for research and diagnostic purposes. In addition, an effort will be made to implement a work planning and control system to assist in the management of labor resources and materials. With the advent of the National Air and Space Museum there is a great need to develop a museum-wide inventory system that would benefit the museum and possibly provide a mode for future identification and location of similar and related objects elsewhere in the world.

At the Smithsonian Oceanographic Sorting Center there is a need to develop a system to handle their inventory of ocean bottom photographs. This system will be designed to complement their present ocean specimen holdings and ocean rock inventories resulting in an integrated ocean inventory system. Additional development will be required for the National Collection of Fine Arts Bicentennial Inventory of American Paintings which will result in a descriptive subject file on each painting to assist the curator and to provide a tool for scholars. An additional computer software specialist is requested.

Operations/Key punch Section (1 position; \$9,000)

The services of an additional keypunch operator is required to convert customers' source documents and the Division's computer coding sheets to computer readable form.

SUPPLY DIVISION

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Procurement of goods and services <u>1/</u>	10	\$121,000	10	\$122,000	12	\$140,000
Property management <u>2/</u>	3	45,000	3	50,000	3	51,000
Receiving and stock supply <u>3/</u>	4	113,000	4	140,000	5	177,000
Administration and office operations <u>4/</u>	<u>4</u>	<u>86,000</u>	<u>4</u>	<u>92,000</u>	<u>4</u>	<u>95,000</u>
Total operations	21	\$365,000	21	\$404,000	24	\$463,000

1/ Responsible for procurement program for the Institution, extending to requirements for the Astrophysical Observatory and its field operations throughout U.S. and the world, Smithsonian Tropical Research Institute, and the several archeological and scientific expeditions in operation throughout the year. The procurement includes wide range of supplies, equipment, furnishings and services, for office, building maintenance, scientific research, and highly specialized Museum exhibit activities.

2/ Responsible for the management of the Institution's property including maintenance of accountability system thereon, proper safeguarding and utilization of property, periodic property inventorying, disposal of excess property, and establishing liability for lost or damaged property. Reviews incoming requisitions to determine accountable items thereon, availability for furnishing from excess, and issues property numbers as required. Responsible for ordering through Federal Supply Stock catalog. Conducts Property Utilization Program for the Institution, including catalog distribution, review of requests, preparation of orders, liaison with Federal Supply, General Services Administration, and other Federal Property officers.

3/ Responsible for the receipt, inspection, issue or storage, of all vendor and Federal Supply delivered items, and for obtaining receipt acknowledgements thereon. Maintains the Institution's general use stores stock of supplies, issue and delivery services thereon, stock replenishment, and supply accountability.

4/ In addition to the responsibilities for policy, planning, coordination, consulting and advising, budgeting and the overall direction of divisional activities, this office prepares and executes contracts for the Smithsonian International Activities Program, Research Grants and Awards, construction, repairs and renovation to buildings, and such other contracts for services, equipment and supplies as are considered complex or require major effort in their administration.

SUPPLY DIVISION

1972 Actual.....	\$365,000
1973 Estimate.....	\$404,000
1974 Estimate.....	\$463,000

The Supply Division procures supplies, materials, contractual services, and equipment for research, curatorial, exhibit preparation, and other Smithsonian activities. It stocks and issues office, laboratory, and other supplies required in daily management operations. It operates a property management program, obtaining excess property in lieu of new procurement wherever possible. The Division maintains property records and requires periodic inventories to insure adequate control and utilization of equipment items.

For FY 1974 a program increase of \$52,000 is requested for procurement and receiving personnel and for stock inventory. An additional \$7,000 is needed for necessary pay.

The growth in research, exhibit and educational programs has increased demands for stockroom supplies. Services have been extended to meet the additional requirements of the recently opened Renwick Gallery. The new Hirshhorn Museum will create additional demands. For economy and efficiency of purchasing, general supply items are bought centrally and stocked by the Division for issue. About \$122,000 are available in FY 1973 for other than personnel costs, and will be used to purchase general office supplies and services. Because of increased support funds, the Division will be able to conduct a more orderly planned procurement and stocking program than in the past. It will be able to buy in larger lots, resulting in more economical procurement. It will continue to conserve funds by purging the inventory of slow-moving items and items used by only one or a few units. Since stock prices continue to rise, many items, however, will continue to be stocked at dangerously low reserve levels. An addition of \$30,000 is requested for stockroom supplies, equipment, and office machine repair services.

During the period from FY 1970 to FY 1973, the Supply Division has not increased its total number of positions from 21. During this same period the overall Smithsonian has acquired new building space, additional staff, and its funds for the general purchasing and contracting have grown very substantially. This overall growth has resulted in a much heavier workload for the Supply Division without an increase in personnel. More help must be added or risk a less effective operation in the future. For this reason, an increase of two clerk typists in the purchasing section and a stock clerk in the receiving and stock section is requested (\$22,000).

MANAGEMENT ANALYSIS OFFICE

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Management analysis and surveys <u>1/</u>	4	\$ 68,000	4	\$ 77,000	6	\$112,000
Management publications <u>2/</u>	4	68,000	4	73,000	6	94,000
Forms management <u>3/</u>	<u>3</u>	<u>32,000</u>	<u>3</u>	<u>36,000</u>	<u>3</u>	<u>36,000</u>
Total operations	11	\$168,000	11	\$186,000	15	\$242,000

1/ FY 1972 - In addition to the surveys and studies required to publish internal and external management materials, the Office made or participated in 25 other studies. FY 1973 - Continue to help resolve management issues. Provide training for education of management analysis staff to insure the application of the latest management theories and current business practices. FY 1974 - Expand support to provide full range of management analysis functions and to apply modern techniques and methodology in support of an aggressive management improvement program.

2/ FY 1972 - In addition to over 210 published items, work proceeded on 22 others, which will be issued in the forthcoming year. FY 1973 - Reduce backlog to reasonable level so that current staff may be responsive on a more timely basis to immediate needs. Implement new administrative directives system. FY 1974 - Continue on a current basis the publication of management materials and promptly issue appropriate policy and procedural items resulting from increased management studies.

3/ FY 1972 - Provided 4,000,000 copies of 690 forms to 85 Smithsonian units. Completed feasibility study for ADP program to improve forms management and control. FY 1973 - Implement ADP program to eliminate manual recordkeeping, reporting, and catalog publishing and to release one man-year to perform forms analysis and design work. FY 1974 - Publish Forms Catalog and work toward consolidating and reducing the number of "house-keeping" type forms wherever possible and standardizing other program support forms.

MANAGEMENT ANALYSIS OFFICE

1972 Actual.....	\$168,000
1973 Estimate.....	\$186,000
1974 Estimate.....	\$242,000

The Management Analysis Office is responsible for assisting the Secretary, other members of the Executive Committee, and heads of organization units in their continued efforts to effect better management. This is accomplished by reviewing policies, missions, and programs and recommending desired changes; recommending improvements in organization structure, systems for programming and planning, operating practices and work processes, and the internal means of communicating policies and procedures to all levels of management. It makes surveys and studies of the organization of work and responsibilities, sequence of operations, layout of facilities, methods and processes used, production scheduling and control, quality of work, and utilization of men, money, materials, and equipment. It develops, coordinates, and assists in the establishment of programs for work measurement, work simplification, production standards, performance analysis, and the management of correspondence, reports, forms, and management directives.

The FY 1974 budget provides for four additional management analysts and technicians at a cost of \$49,000 and for a necessary pay increase of \$7,000.

For the past ten years, the growth of the Smithsonian has out-distanced the capability of this Office. Each year the backlog of essential work has increased while the ability to provide sound management programs and good business practices has decreased. No additional management analyst positions have been authorized since 1962. If this Office is to perform the above range of management analysis work, it must obtain the necessary funds for a program to augment the Office with additional professional manpower, training, and ADP services. With the increased support requested for FY 1974, there can be a strong beginning on a management improvement program of the level and quality the Institution requires of its other programs in research and public service.

The following are examples of backlogged work: Initiate and/or participate in analysis of all facets of collections management. Make an analysis of shipping and receiving functions with particular emphasis on handling and controlling museum collections. Study internal mail-messenger service. Make a survey of all printing and reproduction and related functions. Implement fully postal improvement regulations published in 1970. Participate in project to assess and define all Smithsonian's public service activities. Assist in and/or implement approved recommendations resulting from the survey of protection and security activities, including safety and occupational health. Design and implement a formal system for delegations of authority.

OTHER CENTRAL SUPPORT

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Travel services <u>1/</u>	3	\$ 46,000	3	\$ 46,000	4	\$ 55,000
Offset printing binding <u>2/</u>	<u>7</u>	<u>119,000</u>	<u>7</u>	<u>101,000</u>	<u>8</u>	<u>140,000</u>
Total operations	10	\$165,000	10	\$147,000	12	\$195,000

1/ Includes assistance in planning travel itineraries, obtaining tickets and reservations, and arranging meetings and conferences.

2/ Provides for printing and binding administrative, research, education, and curatorial materials.

OTHER CENTRAL SUPPORT

1972 Actual.....\$165,000
1973 Estimate.....\$147,000
1974 Estimate.....\$195,000

This category includes the Travel Services Office and the Duplicating Section.

The FY 1974 budget contains a request for an additional \$8,000 for travel services and \$25,000 for job printing. Necessary pay in the amount of \$15,000 is sought for these two units.

Travel Services (1 position; \$8,000)

The Office assists official Smithsonian travelers in developing domestic and foreign travel plans, determining the estimated cost of proposed trips, planning the most economical routings consistent with the travelers' needs and with Government and Smithsonian Institution regulations, and in helping to assure that excess foreign currencies are used in lieu of dollars in every possible instance. It applies tariffs to assure accuracy of charges quoted by the airlines; procures airline tickets and makes hotel/motel reservations within and outside the Washington area when requested; and assists in developing plans and budgets for conferences and meetings to be held in the Washington area and elsewhere throughout the world.

An additional travel clerk is needed to assist with a steadily increasing workload; relieve senior staff of routine tasks so they can participate more regularly in travel management activities; and handle the additional workload which will be placed on the Office with the implementation of the Joint Agency Transportation Study's recommendation which will permit automatic payment of airline teleticketing charges. Previously a GTR was issued for each trip; under the new system it is recommended that no more than four GTRs be issued each month for all trips. Necessary additional records, controls, and checks and balances will be required in the TSO to process accurately the monthly teleticketing reports.

Despite the following recorded workload increases, the size of the staff has remained the same since 1966.

<u>Activity</u>	<u>FY 1968</u>	<u>FY 1969</u>	<u>FY 1970</u>	<u>FY 1971</u>	<u>FY 1972</u>
Itineraries issued	2,030	2,646	3,066	3,345	3,752
T/R's issued	1,603	1,910	2,101	2,077	2,441
Air/rail reservations booked	7,372	9,983	10,549	11,641	13,338
Car rental discount cards issued	42	61	75	73	103

Printing Services (1 position; \$25,000)

The Duplicating Section is responsible for producing a wide variety of printed materials for the Smithsonian Institution. Included are administrative issuances, news releases and reports, and informational materials produced by the research, curatorial, and exhibits activities.

The service furnished by this unit is important to the overall program functioning of the Smithsonian Institution. The personnel are well qualified and do an excellent job. But staffing and funding must increase to keep abreast of growing Institutional requirements.

During the FY 1972, the Duplicating Section maintained an average ten-week backlog. There were periods when the backlog was longer. FY 1973 has started with a large increase in workload which was not anticipated. The current backlog is about four weeks.

The additional funds for FY 1974 are necessary to meet the increased workload. One additional multilith operator is requested. One new folding machine and a three hole punch are needed to replace the present obsolete machines. Additional funds for supplies are required (\$25,000).

BUILDINGS MANAGEMENT DEPARTMENT

<u>Program Categories</u>	<u>FY 1972</u>		<u>FY 1973</u>		<u>FY 1974</u>	
	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>	<u>MY</u>	<u>Amount</u>
Protection <u>1/</u>	300	\$3,622,000	330	\$ 3,992,000	421	\$ 4,456,000
Buildings services <u>2/</u>	242	2,839,000	260	3,257,000	387	4,546,000
Mechanical services <u>3/</u>	189	3,981,000	207	4,912,000	238	5,445,000
Total operations	731	\$10,442,000	797	\$12,161,000	1,046	\$14,447,000

1/ Involves the physical security and protection of the Smithsonian's museum and art gallery buildings, exhibits, the National collections of the Institution, and the safety of the visitors, employees, and visiting students and researchers. These services must be furnished for nine major Smithsonian buildings and four other research, collection, and service facilities, seven days a week, 24 hours a day.

2/ Involves cleaning the exhibit areas, offices, workrooms, laboratories, restrooms, and public lounges with a total floor area of 3,700,800 square feet. Also includes efforts to maintain and operate 55 elevators and furnish elevator operators, provision of motor vehicles for transportation of people and objects and communications services, grounds maintenance, and related services. Logistical support to the many programs of the Smithsonian, moving collections and museum objects, and relocation of offices are included. During FY 1972, approximately 17 million persons visited the Smithsonian's museums and art galleries.

3/ Includes the inspecting, operating, servicing, and repairing of the present 10,610 - ton capacity environmental control equipment, used for air conditioning, refrigeration, heating, and humidity control purposes, seven days a week, 24 hours a day. These systems are essential to the conservation and preservation of approximately 62 million objects in the National Collections. Also included are utilities (electricity, steam, gas, water, and compressed air). The skilled trade and craft employees give a varied range of assistance in support of such activities as the installation of special exhibitions and presentations in science, history and art; make repairs to buildings to prevent deterioration; and also make improvements, alterations, and restorations within the buildings.

BUILDINGS MANAGEMENT DEPARTMENT

1972 Actual \$10,442,000
1973 Estimate \$12,161,000
1974 Estimate \$14,447,000

The Buildings Management Department supervises and provides those services which are essential to the protection, operation, and maintenance of nine major buildings, including the original Smithsonian Institution Building, the Arts and Industries Building, the Natural History Building, the History and Technology Building, the Air and Space Building, the Freer Gallery of Art, the Fine Arts and Portrait Galleries Building(housing the National Portrait Gallery and the National Collection of Fine Arts), the Renwick Gallery, and the Hirshhorn Museum and Sculpture Garden. The Department performs various combinations of the basic functions and supporting services for research, collection, special purpose, and support facilities, including the Oceanographic Sorting Center, the Belmont Conference Center, the Anacostia Neighborhood Museum, the Cooper-Hewitt Museum in New York City, and the Silver Hill facility(which provides for the restoration and preservation activities of the National Air and Space Museum, and houses reference collections of aircraft, and other objects of science, technology, art, and natural history). The total floor area housing Smithsonian activities is 3,700,800 gross square feet and consists of 3,287,500 square feet of Smithsonian space and approximately 413,300 square feet of GSA owned or leased space utilized by the Institution. This space is located at 21 different sites in the Washington Metropolitan Area, and one in New York City. Services include the provision of utilities, and the servicing, repair and operation of extensive refrigeration, heating, temperature and humidity control systems. Motor vehicle transportation and communications services are provided as well as improvements and alterations to the buildings and facilities. The Department furnishes safety, physical security and disaster programs, engineering, architectural services, construction management, space management, horticultural services, and other related professional services.

The FY 1974 requested program increase is \$2,086,000 to enable the Department to meet increased demands for services, price increases in various areas, and to meet the needs associated with additional building space. In addition, \$200,000 are being sought for necessary pay increases of current employees.

Hirshhorn Museum and Sculpture Garden (57 positions; \$463,000)

The Hirshhorn Museum and Sculpture Garden is scheduled for initial occupancy in the summer of 1973 with a public opening schedule for mid FY 1974.

In order to prepare the museum for occupancy and the public opening, a great deal of time and effort must be spent in the initial occupancy period checking out and operating the special equipment and the heating, air conditioning, and humidity control systems. Exhibits installation activities will require extensive supporting services from BMD. In addition, once the building is initially occupied, guard service becomes mandatory. At the time the museum is opened to the public, increased custodial and laborer service, elevator operator service, and checkroom services will be required.

In addition to the 22 positions and \$210,000 provided in FY 1973, an increase of 57 positions will be required to provide the necessary operating staff for protection, custodial and laboring services, and mechanical operation

and maintenance to the plant on a 24-hour basis, seven days a week. Funds in the amount of \$463,000 are required for the required additional staffing level of 29 guards (sufficient to man 20 eight hour posts), nine mechanics, and 19 custodians and laborers. No funds are requested for other services due to the fact that base funds available in FY 1973 to purchase equipment and fire detection systems can be applied in FY 1974 to obtain necessary supplies and equipment. This is a requested increase of \$463,000 for the protection, operation, and maintenance of this new museum facility.

Utilities and Communications (\$165,000)

In FY 1972, the Buildings Management Department spent \$1,693,000 for utilities and communications. Present information on higher unit costs and additional consumption indicates that this mandatory expense will increase to \$2,070,000 in FY 1973 and rise to \$2,235,000 in FY 1974. The requested additional \$165,000 includes \$130,000 to fund the increase in the price of steam, which has increased approximately 78 percent since 1970. In FY 1970, the cost was \$1.55 per thousand pounds. In FY 1972, the price per thousand pounds rose from \$2.09 to \$2.30 in December 1971, and to \$2.69 in January 1972.

Included in this amount is \$25,000 to fund the increase in cost and consumption of electricity in existing buildings. Alteration and renovation programs now in progress will result in more air conditioned space with resultant increases in utility, service, and maintenance costs.

Based upon a recent rise in the installation and monthly service costs for telephones, and an increase in the cost of the Federal Telecommunication System intercity telephone services, an additional amount of \$10,000 is being requested to cover these anticipated increases.

Shortages in Protection, Custodial, and Mechanical Services (192 positions; \$1,458,000).

The physical plant and other facilities of the Smithsonian Institution have expanded in size and numbers, public use has been more intensive and a backlog of mechanical and custodial deterioration has accumulated as a direct result of inadequate staffing to maintain the properties at the level they require. In addition, the level of protection and security that can be provided under present staffing is not adequate for the safekeeping of the Nation's treasures and artifacts, and must be reinforced. World-wide concern for security and protection in museums is rising.

After thorough study and analysis of the conditions, problems, and work load statistics, a work management program has been developed. This program is based upon evaluation of work units, frequencies of services, productive man-hour statistics, and related factors. These figures take into account the special characteristics of the Institution's buildings with many special uses, the complexity and operating hours of the equipment, machinery and controls and the intensive usage resulting from the 17 million visits to our buildings.

The application of work standards assures an equitable distribution of existing staff and clearly delineates the need for additional employees to provide the level of services that the Institution's buildings and facilities require. The Buildings Management Department needs an additional 192 positions to fulfill its responsibilities at an acceptable level.

a. Shortages in Protection (62 positions; \$516,000)

The present protection staff of approximately 330 guards and supervisors provide physical security for the Smithsonian museums, art galleries, and the property housed therein. The staff is also responsible for the overall control and security of all persons using the facilities.

Forty-eight additional guards (\$414,000) are requested to provide adequate security for exhibitions which have recently been opened or are to be opened to the public. Among these are the Monetary History and the Photography Halls, Book Store Exhibit, and Toy Exhibit in the Museum of History and Technology; the Physical Geology Hall and the Egyptology Hall in the Museum of Natural History; the World War I and Drug Exhibits in the Arts and Industries Building; and the Experimentarium in the Air and Space Museum. These new halls and exhibits have extended existing posts and reduced the capability for Institutional surveillance and protection drastically.

Ten additional guards (\$65,000) are requested to improve security at the major public entrances for proper surveillance and control, and to patrol the non-public areas such as reference collection areas, offices, workshops, and libraries for the protection of the occupants and the prevention of theft and pilferage. Four additional guards (\$27,000) are requested for necessary security outside the Smithsonian buildings. Increases in thefts and the need for security for personnel and visitors requires these additional guards. Support funds of \$10,000 are also requested for supplies and materials and equipment for the additional guards.

b. Shortages In Custodial and Buildings Services (108 positions; \$622,000)

The present buildings services staff of 260, including supervisors, janitors, laborers, telephone operators, motor vehicle operators, perform repetitive services for the Institution. Services include cleaning operations in reference collection areas, offices, restrooms, workrooms, laboratories, and exhibit areas. In addition, services also include moves of furnishings, equipment, collections, transporting museum objects, operating 55 elevators, pest control measures, horticultural services, and general administration of space and office needs with regard to Institutional management requirements.

One hundred and six additional janitors and laborers are requested to bring the services in all buildings up to the acceptable standards as determined by building surveys (\$536,000). In addition, it is imperative that the Institution employ a space analyst for administrative work as regards future planning and analysis for bureau needs, and an engineering assistant to oversee new construction and capital development (\$55,000).

Support funds of 31,000 are also requested for necessary supplies, materials, and equipment for these new employees.

c. Shortages In Mechanical Services (22 positions; \$320,000)

The present mechanical services staff of 207, including supervisors, carpenters, painters, plumbers, electricians, machinists, sheetmetal workers, and refrigeration and air conditioning mechanics, is responsible for inspecting, operating, servicing and repairing the complex mechanical equipment located in the Smithsonian buildings. The staff is also responsible



for making repairs to buildings, making improvements, alterations and restorations and giving assistance in support of program activities such as exhibits and special events.

Twenty-two additional mechanics are requested to provide much needed maintenance and repairs to existing buildings and equipment (\$310,000). Recurring painting is needed in all buildings to keep the areas presentable for both Smithsonian personnel and visitors. The heavy traffic in the buildings each year accelerates the deterioration process and make it necessary to perform such services as painting, door repairs, light replacements and building repairs at a frequency much greater than in office buildings. With the ever changing exhibits being installed the need for carpentry and electrician services has increased to the point where many backlogs exist. The addition of these new employees will eliminate these problems and enable the Department to serve the Institution without eliminating essential basic maintenance to the building equipment that usually results in costly major repairs. Support funds of \$10,000 are also requested for necessary supplies, materials, and equipment for these additional employees.

Tab B

SCIENCE INFORMATION EXCHANGE

SMITHSONIAN SCIENCE INFORMATION EXCHANGE, INC.

1972 Actual.....\$1,600,000
1973 Estimate.....\$1,600,000
1974 Estimate.....\$1,900,000

The Smithsonian Science Information Exchange is the only information system of its type in the world. The Exchange is designed to collect, index, store, and retrieve information about ongoing research supported by the Federal Government and non-Federal organizations in all areas of basic and applied research. It has been in existence since 1950 and covers all areas of life, physical, behavioral, and engineering sciences. The Exchange provides services designed to help research program managers and administrators as well as individual scientists avoid unwarranted duplication of research efforts, evaluate existing research efforts, and plan for new research programs.

The Exchange not only provides information directly to users but provides data to a number of specialized information centers, such as the Highway Research Information Center, the Clearinghouse for Research on Smoking, the Center for Applied Linguistics, etc. These centers provide information on both ongoing research and publications resulting from research and thus reach an even wider total audience than the Exchange's direct users. In addition, information contained in the Exchange's data base is used to prepare catalogs published by Federal agencies of ongoing work in specific areas of research such as Water Resources Research, Health Services Research, Aquatic Pest Control and Pesticide Residues in Aquatic Environment, Dental Research, etc. These catalogs, which have variable publication rates and distribution, are being prepared in increasing number and areas of interest and make information more readily available to large numbers of users on a significantly broader scale than individual requests made to the Exchange.

Among SSIE's unique features is the ability to provide prompt response to both broad and specific requests for information on research regardless of the source of support and on a multidisciplinary basis. The Exchange achieves uniformity of indexing by means of a well-trained scientific staff and a well-developed data processing system, utilizing the latest computer and computer technology available for input, storage, and retrieval of information.

The increasing demand for SSIE services and the income derived from such services are shown in Table I. Total income amounted to \$371,000 in FY 1972. A further breakout of these figures indicates that Federal use accounts for about 60 percent of the Exchange's income from user services. In addition, a large percentage of non-Federal use is by Federal grantees and/or contractors who use of SSIE enhances that of the Federal Government in the management of Federally appropriated funds. Although income from user services has increased significantly over the past several years, the income from these services is not expected to reduce the requirement for Federal support in any major way until it reaches approximately \$650,000 at which point income will slightly exceed the cost of providing the service.

An appropriation of \$1,900,000 is requested for FY 1974 to cover the cost of 10 new positions and increasing operations costs required for support of the collection, indexing, and storage of input into the SSIE data base. The funds are necessary if the Exchange is to maintain a comprehensive and timely data base.

This requirement for additional funds arises from several factors. The delay in obtaining adequate Federal funding until late in FY 1972 (and resulting staff reductions) created backlogs in the registration and indexing of research records. In FY 1973 as a result of increasing personnel costs (necessitated by the January 1972 comparability pay raise) not offset by an additional appropriation, a further reduction of the full-time input staff (from 71 to 67) has been required. In the past, SSIE has partially compensated for a decline in personnel strength by improved methods of data processing. Further such improvements are not expected to compensate for FY 1973 staff reductions. A shift from full-time employees to part-time personnel may allow the Exchange to keep from falling too far behind in input, but backlogs will probably continue to rise. Table II summarizes the backlog situation. A rise in input is also expected as a result of the impact of the General Accounting Office report of March 1, 1972, entitled Usefulness of the Science Information Exchange Hampered by Lack of Complete, Current, Research Information and the resulting SSIE user study being carried out in the fall of 1972. As a third factor, a problem of an additional workload has developed in recent years, as shown in Table III, as a result of new summaries submitted by agencies on continuing projects. These new continuation summaries which comprised 68 percent of the total input in FY 1968 rose to 86 percent in FY 1972 as a result of stronger efforts on the part of agencies to provide more accurate summaries of their research projects. This development has increased significantly the workload on the Exchange's professional staff. The size of this staff has not been increased to cope with this growing workload of projects to be indexed but rather has had to be reduced steadily because of funding shortages.

The requested 10 additional jobs include four scientists, an administrative assistant and three clerks, and two systems analysts for data base maintenance and development costing \$126,000. Other major cost components of the requested \$300,000 increase include higher costs of base staff (\$60,000); rental increases and upgraded EDP equipment (\$35,000); higher building rent (\$5,000); general other contractual services (\$38,000); and supplies, printing, and postage (\$20,000). Table IV summarizes the total proposed FY 1974 budget including projected user income and expenses of \$500,000.

The FY 1974 budget is based on the belief that SSIE performs a vital role in the research management process by supplying from a central source data needed by researchers and research administrators in the conduct and management of complex research projects and programs. It is considered essential to the value of this service that adequate staff be available so that backlogs in subject indexing can be reduced from their current levels, that the timeliness of the data entered into the bank be improved, and that the Exchange secure the resources necessary to process the additional volume during FY 1974.

Table V presents revenue, expenditure, and related data from FY 1966 through projections for FY 1974. The table reflects a rapid reduction in the size of the SSIE staff during a period of rapidly rising personnel expenses. Attempts have been made to reduce the impact of this loss in staff through the development of increasingly sophisticated and efficient automated techniques. These attempts have been partially successful. User revenues have also provided an increasing share of the total costs of operation of the Exchange, although many of the larger contractual efforts also increase the requirement for outside services and service support.

TABLE I

Summary of Major Categories of Services Provided by SSIE

Major Category of Service	Includes	Type of User	Volume of Reports			Dollar Income		
			1970	1971	1972	1970	1971	1972
Requests for Subject Information	Custom Subject Searches Periodic mailing of Subject Searches Pre-run Subject Searches Historical Subject Searches	Federal	704	901	1,423	\$23,662	\$37,664	\$ 60,070
		Non-Federal	1,272	1,038	2,680	40,171	43,533	104,652
		Total	1,976	1,939	4,103	63,833	81,197	164,722
Requests for Searches on non-subject information	Investigator Searches Searches by Document Number Automatic Distribution of Documents	Federal	40,024	37,898	45,912	13,510	12,005	9,735
		Non-Federal	369	602	462	595	1,002	565
		Total	40,393	38,500	46,374	14,105	13,007	10,300
Large Requests for Information by Ad- ministrative* or Subject Categories or both *e.g., geographic location, support- ing agency, etc.	Negotiated Requests	Federal	39	37	61	39,340	30,510	54,275
		Non-Federal	14	32	63	74,124	26,388	47,497
		Total	53	69	124	53,464	56,898	101,772
Preparation of camera- ready or tapes for catalogs of ongoing research in selected areas	Contracts	Federal	4	5	7	70,473	77,638	94,405
		Non-Federal	--	--	--	--	--	--
		Total	4	5	7	70,473	77,638	94,405

*e.g., geographic
location, support-
ing agency, etc.

TABLE II

INDEXING BACKLOG SUMMARY FY 1969 - 1972

Branch	FY 1969		FY 1970		FY 1971		FY 1972	
	New Projects	Continuations	New Projects	Continuations	New Projects	Continuations	New Projects	Continuations
Medical	610	3,270	53	157	508	6,720	206	10,096
Biological	440	1,161	65	825	74	1,236	-	1,281
Agriculture	2,470	240	284	1,216	525	7,325	47	6,175
Behavioral	102	580	780	930	2,460	2,860	3,095	6,500
Social	460	70	250	360	350	552	1,400	1,586
Earth Sc.	90	279	444	596	503	1,710	86	145
Chemistry	94	1,071	163	147	517	849	357	606
Materials	-	1,549	21	238	774	889	834	1,951
Engineering	1,906	1,782	704	418	784	1,583	2,865	3,591
Physics	189	1,918	-	755	390	980	-	263
Mathematics	603	1,235	398	1,100	50	295	450	825
Electronics	100	195	295	175	2,034	309	901	1,306
TOTAL	7,064	13,350	3,457	6,917	8,969	25,308	10,241	34,355

Note: All figures are as of June 30 -- end of fiscal year - except Life Sciences for FY 1971 is end of July.

TABLE III

Relationship of Projects Registered to Size of Professional Staff

	<u>Grants Registered</u>	<u>New Projects</u>	<u>Continuations with New Summary</u>	<u>Total # of New Projects and Continuations with New Summary</u>	<u>Continuations with Identical Summary</u>	<u>Size of¹ Professional Staff</u>	<u>Other Staff</u>	<u>Total Staff²</u>
FY 72	92,400	36,800	42,300	79,100 (86%)	13,300	25	58	83
FY 71	96,600	39,000	43,600	82,600 (85%)	14,000	26	64	90
FY 70	79,800	35,000	24,900	59,900 (75%)	19,900	32 ³	73	105
FY 69	89,000	45,300	23,800	69,100 (78%)	19,800	47 ⁴	90	137
FY 68	97,400	40,800	24,900	65,700 (68%)	31,700	45	99	144

¹This includes total professional staff for both input and output operations.

²Figures are man-years available at the beginning of each fiscal year.

³RIF occurred March 28, 1970.

⁴RIF occurred December 6, 1968.

TABLE IV

SMITHSONIAN SCIENCE INFORMATION EXCHANGE, INC.

PROPOSED BUDGET FY 1974

	<u>Total Cost of Operations</u>	<u>Federal Support Requested</u>	<u>User Support</u>
Personnel	\$1,745,548	\$1,379,324	\$366,224
Salaries	1,527,610	1,211,537	316,073
Benefits	217,938	167,787	50,151
Contract Services			
Travel	13,000	11,000	2,000
Transportation of Things	2,000	1,600	400
Rents			
Telephone	10,000	8,000	2,000
IBM	274,552	219,642	54,910
Xerox	12,000	9,600	2,400
Building	103,400	80,800	22,600
Other	10,000	8,964	1,036
Printing	8,000	6,000	2,000
Other Services			
Equipment Maintenance	4,000	3,120	880
Other	57,500	44,000	13,500
Supplies	25,000	19,950	5,050
Acquisition of Capital			
Equipment	10,000	8,000	2,000
TOTAL	\$2,275,000	\$1,800,000	\$475,000
SI Services	<u>125,000</u>	<u>100,000</u>	<u>25,000</u>
GRAND TOTAL	\$2,400,000	\$1,900,000	\$500,000

TABLE V

SSIE Revenues & Expenditures
(1966 - 1974)

SSIE Fiscal Year	Total Staff Size		Staff Salaries and Benefits		ADP Equipment Expense		Other Operations Expense	
	Actual	% Increase (Decrease)	Actual (1,000)	% Increase (Decrease)	Actual (1,000)	% Increase (Decrease)	Actual (1,000)	% Increase (Decrease)
1966 (Base Year)	164	--	1,364	--	171	--	331	--
1967	155	(6%)	1,380	1%	178	4%	313	(5%)
1968	139	(15%)	1,427	5%	217	27%	331	-0-
1969	134	(18%)	1,330	(2%)	246	44%	382	15%
1970 ¹	88	(46%)	1,396	2%	254	49%	368	11%
1971 ¹	87	(47%)	1,363	-0-	250	46%	309	(7%)
1972 ²	87	(47%)	1,439	5%	258	51%	301	(9%)
1973 ³	85	(48%)	1,471	8%	240	40%	315	(5%)
1974 ³	98	(40%)	1,746	28%	275	61%	380	(15%)

SSIE Fiscal Year	Total Cost of Operations		Direct Federal Support		SIE Revenues		Input Processing Volume ⁵	
	Actual (1,000)	% Increase (Decrease)	Actual (1,000)	% Increase (Decrease)	Actual (1,000)	% Increase (Decrease)	Actual	% Increase (Decrease)
1966 (Base Year)	1,866	--	1,902	--			--	--
1967	1,871	-0-	1,850	(3%)			--	--
1968	1,976	6%	2,000	5%			65,700	--
1969	1,958	5%	1,800	(5%)	173	--	69,100	5%
1970	2,018	8%	1,707	(10%)	212	4%	59,900	(9%)
1971 ¹	1,921	3%	1,680	(12%)	231	9%	82,600	26%
1972 ²	1,922	3%	1,300	(32%)	371	75%	79,100	20%
1973 ³	2,025	8%	1,600	(16%)	425	100%	82,000	25%
1974 ³	2,400	29%	1,900	-0-	500	136%	92,000	40%

¹10 month fiscal year projected on a 12 month basis.²Projection based on current budget limitations.³Projection based on projected requirements.⁴1970 was selected as a base year for comparison of revenues as cost recovery program covered only a portion of FY 1969.⁵Includes continuations with new summaries only (see Table II). Pre-1968 data is not available.

Tab C

SPECIAL FOREIGN CURRENCY PROGRAM

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS, SCIENTIFIC AND CULTURAL RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

1972 Appropriation	\$3,500,000	
1973 Appropriation	\$3,500,000	Equivalent in "Excess"
1974 Estimate	\$9,000,000	Foreign Currencies

An appropriation of \$9,000,000 in foreign currencies determined by the Treasury Department to be in "excess" to the normal needs of the United States is requested for Fiscal Year 1974. The appropriation will be used:

1) To continue a program of grants to United States institutions for field research in those countries where "excess" local currencies are available. The research will be performed in the following general areas of Smithsonian Institution interest and competence:

Commitment of Funds by Program Area

	FY-1966-72 Cumulative <u>Commitments</u>	FY-1973 Estimated <u>Commitments</u>	FY-1974 Appropriation <u>Request</u>
Archeology and Related Disciplines	\$9,017,275	\$1,400,000	\$2,000,000
Systematic and En- vironmental Biology	6,312,544	1,400,000	2,000,000
Astrophysics and Earth Sciences	982,591	500,000	750,000
Museum Programs	178,000	190,000	220,000
Grant Administration	73,590	10,000	30,000
	<u>\$16,564,000</u>	<u>\$3,500,000</u>	<u>\$ 5,000,000</u>

2) To complete with one final payment of \$4,000,000 equivalent in "excess" Egyptian pounds the United States contribution to UNESCO's international

campaign to preserve the archeological monuments in Nubia which are destined to be inundated by Nile River waters regulated by the Aswan Dam. This contribution to the preservation of the monuments on the Island of Philae was proposed by President Kennedy in his letter to the Congress dated April 6, 1961. The Smithsonian is seeking this appropriation because the function of making grants for archeology abroad using "excess" foreign currency was approved by the Office of Management and Budget for transfer from the Department of State to the Smithsonian since the earlier United States contributions to UNESCO's Nubian campaign were made. The request is made at this time because the international campaign has received pledges for two thirds of the funds required for the preservation of the Philae monuments and work has begun.

In the words of President Kennedy, "The Temples on the Island of Philae are known as the 'Pearl of Egypt.'.. There would be no more effective expression of our interest in preserving the cultural monuments of the Nile Valley than an American offer to finance the preservation of these temples. I am directing that the Egyptian pound equivalent of 6 million dollars be set aside for this purpose. When required an appropriation to cover the use of this sum will be sought."

ON-GOING RESEARCH GRANTS PROGRAM

In its seven years, the Smithsonian Foreign Currency Program has awarded 362 grants totalling almost \$16,800,000 equivalent in "excess" foreign currencies to United States institutions of high learning. It has thus benefited more than 200 museums, universities and research institutes in 32 states. Benefits include research opportunities for more than 214 post-doctoral scholars and more than 221 pre-doctoral students. Benefits also include major additions to the study collections of more than 28 museums and universities in 18 states.

NEED FOR INCREASE

In FY 1972, obligations totalled \$3,400,000 equivalent in "excess" foreign currencies out of a total appropriation for that year of \$3,500,000 equivalent. In addition, awards totalling \$922,000 equivalent remained unfunded.

An increased appropriation is essential in FY 1974 to cover unfunded awards and to meet the demand reflected by the constant flow of new and meritorious research proposals. New applications known to be in preparation total 40. This level of activity persists in spite of the removal of Israel, one of the most active areas of Smithsonian sponsored research, and Morocco from the list of "excess" currency countries.

Moreover, as a result of President Nixon's visits to Yugoslavia and Poland, the number of applications for joint research in these countries has increased. In Yugoslavia collaboration in biological and anthropological research has gotten started as a result of his visit; in Poland, joint research proposals long stalled with Polish authorities have been restarted in the environmental sciences and in astrophysics particularly.

Renewed interest in research collaboration in Pakistan is contributing to the momentum of new applications also, with four major proposals in the fields of environmental assessment and conservation in preparation by United States institutions. In Burma, development of two proposals, one in archeology and one in conservation, undertaken by United States institutions in collaboration with the United Nations Educational Scientific and Cultural Organization and the International Union for the Conservation of Nature respectively, provide the first indications of renewed Burmese interest in collaborative research.

In India alone, 28 projects, primarily in the field of environmental assessment, are in different stages of development. In India, and in Egypt as well, successful on-going research continues to receive a major portion of Smithsonian funds despite changing political winds at the governmental level.

The increase is essential also to ensure support for new and on-going research which contributes to United States national programs under, for example, the International Biological Program, the International Decade of Ocean Exploration, the National Aeronautics and Space Administration, the National Academy of Sciences, the United States National Museum and the Department of Interior's cooperative programs abroad under the Endangered Species Conservation Act.

The appropriation increase of \$1,500,000 equivalent in "excess" foreign currencies is essential to meet these on-going and new demands. This request is, however, \$1,000,000 equivalent lower than that for FY 1973. This is so because of the removal of Israel and Morocco from the list of "excess" currency countries and because of the limited amounts of local currencies remaining in Yugoslavia and Tunisia. In these latter two countries, new research must be limited to ensure that funds are available to carry on-going research to fruition and that full value is received from funds already invested in such research.

USE OF FOREIGN CURRENCIES SAVES HARD DOLLARS

Special Foreign Currency Program appropriations are an advantageous source of research monies. This is so because they are not new appropriations of tax dollars and because delay in the use of the "excess" accounts means continuing losses to the United States Treasury as these accounts lose value through inflation and devaluation. Moreover, these appropriations do not add significantly to the President's budget total because the Commodity Credit Corporation reduces its appropriation request by an amount equal to the amount of foreign currencies expended.

At the same time, Special Foreign Currency Program appropriations contribute to essential national research objectives abroad without contributing to a balance of payments deficit. Moreover, Smithsonian Foreign Currency grants frequently serve as dollar-saving supplements to the dollar grants of both public and private agencies like the National Endowment for the Humanities, the National Science Foundation, the National Institutes of Health, the National Aeronautics and Space Administration, the World Wildlife Fund, the National Geographic Society, the John D. Rockefeller III Fund and the Wenner-Gren Foundation. In such cases, the foreign currency grants cover costs in the host country; the dollar grants are expended in the United States for equipment not available in "excess" currency countries, for American salaries, laboratory fees and the like.

OUTSTANDING PROGRAMS

Outstanding programs receiving Smithsonian Foreign Currency Program Support include:

1. Denison University's archeological excavations at Sirmium in Yugoslavia where research has provided new understanding of the nature of Roman rule in its provinces and particularly of the processes of change in these areas as the empire declined and control passed to the "barbarian hordes".
2. Yale University's basic ecological studies in the Gir Forest Sanctuary in India which have been adopted as a model by Indian National Parks and conservation officials for further ecosystem studies in the Parks leading to development of sound park management programs.
3. Utah State University's pioneering computer-programmed studies of desert ecosystems in the United States which have been extended to Tunisia and are planned for India as well. In these two countries, the studies can be expected to have special importance because of the dramatic annual loss of scarce agricultural land to desert waste land.
4. The Smithsonian Institution's (Center for the Study of Man) studies synthesizing current anthropological understanding about what hinders educational reform. These studies are intended to provide governments with the best guidelines possible toward achieving such reform.

Direct dollar costs to the Smithsonian for its Foreign Currency Program are limited to those for administrative personnel in Washington. During fiscal year 1973 six people were employed in the Office of International Activities for this purpose at a total cost of about \$114,000.

Two additional personnel are requested in fiscal year 1974, a regional coordinator for South Asia and a clerk-typist, for a total cost of \$154,000 for administration of the Foreign Currency Program. This increase is essential to manage the \$1,000,000 equivalent, or 40% increase in the foreign currency appropriation in FY 1972, which was repeated in FY 1973, and to meet the special demands of growing research activity in South Asia. (See Salaries and Expenses justification for the Office of International Activities).

This Special Foreign Currency Program request, as in the past, is based on budget projections for on-going research and on pending and new research proposals which include firm research proposals, those postponed by lack of sufficient funds, and other sample or illustrative proposals based on firm indications of interest both within and without the Smithsonian. They represent the Institution's selection of possible projects which appear most promising for successful development and implementation during fiscal year 1974. It should be noted, however, that actual implementation of these projects will be contingent upon three factors: review by the Smithsonian's national scientific advisory councils, review and approval by American embassies overseas, and appropriate cooperative arrangements with host-country institutions or Governmental authorities.

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

Obligations of Funds by Country

Fiscal Years 1972, 1973, and 1974

Country	FY 1972 Actual	FY 1973 Estimate	FY 1974 Estimate
Burma.....	\$ 200	\$ 8,000	\$ 12,000
Egypt.....	659,400	500,000	4,680,000
Guinea.....	-	2,000	8,000
India	555,500	1,200,000	1,350,000
Israel.....	506,600	-	-
Morocco.....	70,500	160,000	-
Pakistan.....	13,500	200,000	650,000
Poland.....	67,200	230,000	650,000
Tunisia.....	502,600	400,000	500,000
Yugoslavia	<u>1,008,900</u>	<u>800,000</u>	<u>1,150,000</u>
	<u>\$3,384,400</u>	<u>\$3,500,000</u>	<u>\$9,000,000</u>

Tab D

CONSTRUCTION

CONSTRUCTION AND IMPROVEMENTS
NATIONAL ZOOLOGICAL PARK

1972 Appropriation\$ 200,000
1973 Appropriation\$ 675,000
1974 Estimate\$4,800,000

An appropriation of \$4,800,000 is requested for planning the Connecticut Avenue visitor center, restaurant, and terrace and underground parking; designing the primate exhibit and surrounding site (bear, Gelada baboon, goat, and sheep exhibits); construction of a large cat exhibit, wolf exhibit, and pheasant cages; and for the program of renovation and repairs of existing facilities at the National Zoological Park.

During the past year the architectural firm of Faulkner, Fryer and Vanderpool and landscape architect, Lester Collins, have been preparing a new and revised Master Plan for the entire Zoo as requested by the Commission of Fine Arts. This plan will emphasize the animal exhibits in a park-like setting, minimizing the architectural features, such as buildings. The latest techniques in animal exhibition, management, care, and education are being incorporated into this plan. At the same time, the eighty-year old Zoo continues to be used by millions of visitors from all over the country. Renovations and repairs must continue in order to keep the present zoo habitable for the animals and enjoyable to the visitors even while plans are being completed, and implemented, for a fully modernized Zoo.

Funds are requested in the following categories:

1. Construction of the Large Cat Exhibit, Wolf Exhibit, and Pheasant Cages (\$3,300,000)

An appropriation of \$3,000,000 is requested for the large cat (lion and tiger) exhibit. This will replace the present Lion House constructed in 1890 which is a dangerous fire hazard. The old building is substantially as it was built, no large scale remodeling has ever been done, and the small and confined exhibit cages are typical of zoo exhibit techniques at the turn of the century. Rehabilitation is undesirable from an animal exhibition and management viewpoint, and uneconomical from a design and construction viewpoint. The new lion and tiger exhibit will feature large outside exhibit yards or grottos fronted by wide visitor walkways, interspersed with seating and viewing areas. Wide water moats will be used to contain the animals. Extensive landscaping will be employed to present a natural environment with the illusion of freedom for the animals. The necessary shelters, cubbing dens, and animal holding and service facilities, including curator's offices and laboratories, will be underground structures so as to minimize the impact of architectural structures upon the landscape. Indoor animal viewing for visitors who frequent the Zoo during periods of inclement weather will be provided. Planning funds (\$275,000) for this major new exhibition are in the FY 1973 appropriation.

Funds in the amount of \$300,000 are requested to construct the wolf exhibit, pheasant cages, and other minor exhibits. These exhibits will occupy areas of the Zoo not presently used for animal exhibits and, in turn, free the present sites for these exhibits for other development. This will make possible the initiation of some sequential phasing of work and give momentum to Master Plan implementation.

2. Planning (\$1,220,000)

An amount of \$720,000 is sought for design of the Connecticut Avenue entrance and the terrace parking and underground garage. Schematic designs for these facilities were included with the Master Plan for the Zoo which received approval from the Commission of Fine Arts on July 12, 1972 and National Capital Planning Commission on September 7, 1972.

The Connecticut Avenue entrance facility will include the Zoo's administrative offices, now using the Holt house built for a private residence in 1805; public information, auditorium, and educational facilities; and a public dining facility with operations continued through the evening dinner hour.

Design of the terraced parking will include underground parking areas in a ratio of one space on a terrace to two spaces in an underground structure. The total number of spaces will range from 1500 to 2200 cars. The higher number is the recommendation of the parking consultants in the Master Planning. There will be 140,000 square feet of the underground structure used to house the maintenance shops and warehousing operations, commissary, and police ready rooms. These operations are now scattered throughout the Park in crowded and inadequate quarters causing many control, supervision, and operation problems.

Funds in the amount of \$300,000 are requested for design of the primate exhibit to be located in Rock Creek valley near the Calvert Street Bridge. This design will approximate a habitat environment for the primates currently housed in cramped barred cages. These facilities will afford opportunities to rear family groups of primates and for behavioral research, which cannot be carried out in the present primate facilities. This amount is estimated to include design work for Rock Creek bank protection and the required access road and site development attendant to the primate exhibit.

An additional \$200,000 are requested for the design of sequentially phased projects which are currently under study, i.e., such projects as the bear, Gelada baboons, goat and sheep exhibits, and prototype walks and street furniture (benches, drinking fountains, directional signs, etc.).

3. Repairs and Renovations (\$280,000)

An amount of \$280,000 is required to continue the program of renovation and repairs of existing facilities. This funding is required to keep the old part of the Zoo in use for the visiting public; for the care and comfort of the animals; and to keep the new buildings in good condition so that in the future the Zoo will not be faced with an overwhelming workload of repairs necessary to keep the buildings open. While priorities have not been established, it is planned to use these funds for the following projects:

- a. Insulation of steam lines in tunnel and extension of tunnel.
- b. Installation of heat exchangers at all buildings to convert steam into hot water.
- c. Replacement of Reptile House and Small Mammal House roofs.
- d. Repairs to stone retaining wall along the service road.
- e. Installation of air curtains at hoofed stock buildings.
- f. Miscellaneous electrical improvements including new transformers and distribution panels within buildings.

These renovation and repair projects are accomplished, keeping in mind the Master Plan for the renovation of the Zoo and the projected life expectancy in relation to eventual replacement.

11/3/73 JHJ

RESTORATION AND RENOVATION OF BUILDINGS AND FACILITIES

1972 Appropriation.....\$ 550,000
 1973 Appropriation.....\$5,014,000
 1974 Estimate.....\$7,155,000

An appropriation of \$7,155,000 is requested for the following projects which will increase the usefulness of Smithsonian buildings and facilities for research, collections management, and public exhibition purposes:

	<u>Request</u>	<u>Allowed</u>
1. National Museum of History and Technology Library addition	\$4,000,000	100,000
2. Mt. Hopkins, Arizona, Observatory road and power improvements	385,000	385,000
3. Chesapeake Bay Center laboratory and maintenance improvements	150,000	*
4. Conservation Analytical Laboratory space preparation	50,000	50,000
5. Silver Hill improvements and development	405,000	250,000
6. Center for the Study of Man space preparation	65,000	*
7. Oceanographic Sorting Center airconditioning	50,000	
8. Radiation Biology Laboratory environmental facility	350,000	
9. Library collection and work spaces	105,000	*
10. Anacostia Neighborhood Museum repairs and improvements	50,000	*
11. General building repairs and improvements	470,000	315,000
12. Smithsonian Tropical Research Institute laboratory building, repairs, and improvements	250,000	45,000
13. Fumigation facility in the History and Technology Building	125,000	
14. Photographic laboratory processing space	250,000	
15. Museum Shops remodeling	300,000	
16. Smithsonian Facilities Master Plan	150,000	75,000
	<u>\$7,155,000</u>	<u>\$1,220,000</u>

National Museum of History and Technology Library Addition

An amount of \$4,000,000 is requested to finish architectural plans and for construction of additional library space in the National Museum of History and Technology. The FY 1973 appropriation contains \$150,000 for the first stages of detailed planning. The steady growth of the NMHT collections, and

* Insofar as possible, some portion of these projects should be met under item # 11.

\$ in \$1000s

1/3/73

General Building Repairs and Improvements

<u>Project</u>	<u>Original Request</u>	<u>Final Allocation</u>
	470	315
FAPG		
Courtyard	50	
Roof	50	50
Basement work space	25	
Stonework	35	
	<u>160</u>	
HTB		
Terrace stonework	50	
Fifth floor filler panels	25	
Steps and sidewalks	25	
Fire control systems	50	50
	<u>150</u>	
SI		
Roads and walks	20	
Roof	20	
	<u>40</u>	
FGA		
Sidewalks	15	
Roof	15	
	<u>30</u>	
NHB		
Air filtration system	40	
Fire control systems	50	50
	<u>90</u>	

RESTORATION AND RENOVATION OF BUILDINGS AND FACILITIES

1972 Appropriation.....	\$ 550,000
1973 Appropriation.....	\$5,014,000
1974 Estimate.....	\$7,155,000

An appropriation of \$7,155,000 is requested for the following projects which will increase the usefulness of Smithsonian buildings and facilities for research, collections management, and public exhibition purposes:

1. National Museum of History and Technology Library addition	\$4,000,000
2. Mt. Hopkins, Arizona, Observatory road and power improvements	385,000
3. Chesapeake Bay Center laboratory and maintenance improvements	150,000
4. Conservation Analytical Laboratory space preparation	50,000
5. Silver Hill improvements and development	405,000
6. Center for the Study of Man space preparation	65,000
7. Oceanographic Sorting Center airconditioning	50,000
8. Radiation Biology Laboratory environmental facility	350,000
9. Library collection and work spaces	105,000
10. Anacostia Neighborhood Museum repairs and improvements	50,000
11. General building repairs and improvements	470,000
12. Smithsonian Tropical Research Institute laboratory building, repairs, and improvements	250,000
13. Fumigation facility in the History and Technology Building	125,000
14. Photographic laboratory processing space	250,000
15. Museum Shops remodeling	300,000
16. Smithsonian Facilities Master Plan	150,000
	<u>\$7,155,000</u>

National Museum of History and Technology Library Addition

An amount of \$4,000,000 is requested to finish architectural plans and for construction of additional library space in the National Museum of History and Technology. The FY 1973 appropriation contains \$150,000 for the first stages of detailed planning. The steady growth of the NMHT collections, and

the intensification of the Museum's research programs, have made its present library facilities and study areas inadequate to the needs of its staff, and of the many visiting scholars it receives each year. Thousands of rare and important books are in storage and totally inaccessible for research purposes. It is evident that this problem will become more severe in the years ahead. The Institution must provide for its solution.

In addition to this urgent general need, the Institution wishes to provide appropriate facilities for a great collection of rare books in the history of science and technology that may be offered as a gift. This collection has been appraised conservatively at substantially more than a million dollars. Its acquisition by the National Museum of History and Technology would greatly enhance the Museum's department of science and technology and establish the Smithsonian as a national center for the history of science and technology.

The original architect of the History and Technology Building has developed preliminary plans for a sixth-floor addition that would tastefully and economically meet both the overall requirements and the particular need for added library space. Based upon a GSA estimate, this much-needed improvement can be constructed, equipped, and furnished for \$4,000,000.

Mt. Hopkins Observatory Road and Power Improvements

An appropriation of \$385,000 is requested for road and power improvements.

During FY 1973, the Smithsonian Astrophysical Observatory will be undertaking a major renovation of the electrical power system at its Mt. Hopkins, Arizona, Observatory, so that it will match the rapidly increasing observational potential of the installation. An appropriation of \$120,000 in FY 1973 has enabled this project to begin. Engineering studies and design are underway at SAO and the U.S. Army Corps of Engineers will provide the final plans. An improved power distribution system will be installed starting in FY 1973 and reliable power will be available at observing sites by the end of FY 1974. An amount of \$300,000 is required to complete the project including bringing power to the mountain's summit.

The most dangerous sections of the Mt. Hopkins access road are being repaired and improved in FY 1973 with the \$100,000 appropriated. Plans call for continued improvement of hazardous sections in FY 1974 and following years. An appropriation of \$85,000 is needed for this purpose in FY 1974. This project will require about five years for completion at a total cost of about \$800,000.

Chesapeake Bay Center Laboratory and Maintenance Improvements

An appropriation of \$150,000 is requested to improve the facilities at the Chesapeake Bay Center for staff, visiting scientists, and maintenance activities.

An existing unused concrete and steel building skeleton would be enclosed, lighted, and used for vehicle and boat storage and workshop. As much of the Center's work is done actually in the water of the Rhode River estuary, several boats are maintained for use by the scientists. There currently is no indoor spot where they can be taken from the water and

either stored during the winter or worked on in bad wather. Any work done on boats out of water is totally dependent on good weather. This building would also be used for the vehicles of the Center and for their maintenance, which is now done outside only. Renovation of this structure will cost \$30,000.

The Center is remote from urban facilities and, therefore, services that would normally be contracted for locally must be done on-site by the maintenance staff. Funding of \$25,000 is requested for renovation of a farm garage to be used as a workshop for the Center. The shop would be equipped with wood and metal working equipment thereby permitting on-site construction or repair of items used for scientific research or items required for the various buildings of the Center.

The principal building of the Center is a two-story converted dairy barn. It is of extremely sound construction (steel girder and reinforced concrete). The lower level is currently primarily laboratory space, the second level is office space. With expansion of programs of the Center, additional office and laboratory space are required. In order to save on duplicate heating and other systems, the most sound expansion of space would be to build a third floor on this building. The almost "bomb-shelter" construction of the building should make such a plan readily accomplished. A sum of \$95,000 is required to carry this out.

Conservation Analytical Laboratory Space Preparations

The Laboratory has 10 staff, one intern, books, benches, shelving, and \$120,000 worth of scientific equipment multi-layered into 2,600 square feet. The space is desperately overcrowded to the point of endangering museum objects under treatment. One other staff member occupies a corner of Musical Instruments' workroom. Two additional interns have desks in the Underwater Laboratory.

It is now planned to acquire 2,000 square feet of adjacent space to be relinquished by Office of Exhibits by FY 1974. It will have to be re-equipped with: fume extraction, dust-proof ceilings, humidity control, sinks, water, properly located power supplies, resilient-tile floor covering, work-benches, matching lighting, and walls painted to compensate for lack of any windows.

With careful organization this refurbished space will immediately relieve a badly over-crowded situation and may later house additional staff requested to begin correction of the deficiencies in the Smithsonian conservation program.

An appropriation of \$50,000 will accomplish this preparation.

Silver Hill Improvements and Development

An appropriation of \$405,000 is requested for the Silver Hill, Maryland storage and restoration facility.

The Institution faces harsh pressures for additional storage and work space. Mall buildings are crammed to the rafters. Exhibits halls have been removed from public use when absolutely necessary to house national collections. Loan programs intensify. Acquisition and retention practice is

under active review at many levels. Material inventories are reduced, but growth and use of national collections exceed any limited gains from such measures. For partial relief, off-Mall storage options have been developed wherever feasible for housing materials requiring only limited access.

In Alexandria in 1970, a 96,000 square foot warehouse in the Federal Records Center was assigned to the Institution. It is now fully used by 14 Smithsonian bureaus and organizations. But on 10 March 1975 it becomes the exclusive property of the City of Alexandria as deeded to it by the U.S. Government. GSA assistance in finding equivalent space is being sought; however no assurances of replacement have been received. The Institution must seek to cover its own needs to the greatest extent possible.

At Silver Hill the growing collections of the National Air and Space Museum require additional safe housing. Exhibits development for the forthcoming major new National Air and Space Museum on the Mall demands additional work space. Although the need for off-Mall storage will continue indefinitely beyond the opening of the new museum (only a small percentage of the study collection can be housed on the Mall), the years immediately ahead, FY 1974 and FY 1975, are critical for assuring effective development of the NASM curation, restoration, fabrication, and exhibit preparation. The Museum of Natural History must gain additional off-Mall storage space as soon as possible to manage effectively its immediate Mall space problems. Other Mall activities are pressed hard to relocate to off-Mall those of their activities that can be carried out effectively so placed. The Photographic Services Division's processing laboratory is a prime example. Centralized Office of Exhibits workshops is another.

All these needs speak to the value of the fullest use possible of remaining development options at the Institution's 21 acre Silver Hill (Suitland) site for low-cost, temporary structures. Twenty-one structures totaling 265,000 square feet have been built at the site since 1953. An estimated additional development of 90,000 square feet of comparable configuration (low-cost, single-level structures) is practicable. For FY 1975 there is sought \$350,000 to achieve the next stages of improvement and development of the site. This will permit between 20,000 and 30,000 square feet of additional development for storage and work space through construction of simple, low-cost structures and modifications and additions to present structures--a level of development comparable to that of several earlier years. Site studies are underway to set by late fall the most efficient combination of renovation, extension, and construction of low-cost structures.

An additional \$55,000 is sought for the following projects:

- Repairs and improvements to Building #10 to correct inadequacies and provide improved working conditions. Work includes the installation of high-bay lighting, electrical services, weather proofing of openings to control heat loss, and the installation of surface treatment to improve existing insulation (\$30,000).
- Paving and repair of roads to correct drainage problem and provide a safe traffic surface. Roads have deteriorated with many areas of rough concrete and potential safety hazards for personnel and equipment (\$15,000).
- Installation of a hydraulic platform for loading and unloading of large objects such as aircraft and similar items. This will provide a safe working situation for employees and reduce possible damages during moving operations (\$10,000).

Center for the Study of Man Space Preparations

An appropriation of \$65,000 is requested to prepare space in the Natural History Building for use by the Center for the Study of Man. The Center now occupies temporary and divided space assignments in this building which are required to meet the research and curation needs of the botany and anthropology departments. With the acquisition of rental space in L'Enfant Plaza by the Smithsonian, the Supply Division will be relocated from the Natural History Building. This provides an excellent opportunity to reassign this space to the Center and return its space to museum purposes. This will permit the Center to bring its staff together for greater efficiency during its intensive efforts to prepare the Encyclopedia of North American Indians for Bicentennial publication. The \$65,000 will be used to complete partial second-level decking which now exists; install partitions and finishings; provide electrical, heating, ventilation, and air-conditioning conversions; and provide necessary floor coverings.

Oceanographic Sorting Center Air-conditioning

An appropriation of \$50,000 is requested to adequately air condition the fish section of the Smithsonian Oceanographic Sorting Center. Presently, conditions in this unventilated section of the Center present a significant health hazard. Personnel are constantly exposed to toxic fumes from the preservatives used in processing biological samples and for storage of collections. Under conditions of moderately low temperatures, the problem is not serious. Until this section is properly air conditioned, however, hundreds of man hours are lost when warmer temperatures result in excessive formalin fumes. In addition to the health hazard created by the combination of higher temperatures and excessive fumes, there is a significant effect on the specimens stored in preservatives. Fluctuating preservative temperatures cause deterioration of specimens and a chemical breakdown of the preservative.

Radiation Biology Laboratory Environmental Facility

One of the phases of the relocation of the Radiation Biology Laboratory to Rockville, Maryland is the projected fabrication of a glass environmental facility to replace the plant growing structure left on the Mall behind the original Smithsonian Building. This facility is an essential requirement to conduct research involving solar radiation and environmental biology. Its completion will enable researchers to study the influence of the major physical factors, such as temperature, humidity, solar radiation, and gaseous constituents of the atmosphere, on the growth and development of plants. The basic facility has been funded with appropriations in previous years to relocate the RBL and is expected to be completed by June of 1973. The structure will house the machinery and control equipment on the first floor. The second floor will be a thermopane glass structure for housing the individual environmental control rooms. An appropriation of \$350,000 is requested to complete the installation of four plant growing areas with environmental control capability. These rooms will be used to study the influence of gases, including pollutants, and other physical factors on plant growth, development, and reproduction. With the exception of the foundation, this facility including the proposed plant growing rooms consists of modular and demountable units and equipment which can be reusable elsewhere.

Library Collection and Work Spaces

An appropriation of \$105,000 is requested to continue a program of improving spaces for the proper care and accessibility of library materials.

--\$75,000 to finish a remodelling project in the General Library area of the Natural History Building which was begun in FY 1971. The first appropriation of \$50,000 went to double deck and remodel the catalog division and to increase and improve that work area. In FY 1973, an appropriation of \$60,000 will complete the remodelling of the north side of the corridor, including replacing decking which is no longer strong enough to support any activity, and to modify very old stack space which is isolated from other stack areas, to accommodate badly needed staff work areas. The \$75,000 now requested will accommodate the completion of double decking of the south side of the corridor, expansion of existing stack area, and the remodelling and refurbishment of the main reading and reference areas of the general library.

--\$25,000 to increase and outfit space in the Smithsonian Astrophysical Observatory branch library. That branch has increased in size at a very rapid rate and space problems there are critical. Requested funds will approximately double available space there by modification of adjoining available areas.

--\$5,000 to provide reader space in the anthropology branch library. This is the largest and most heavily used branch library in the Natural History Building. The requested funds are to modify and outfit existing space to fit users' needs.

Anacostia Neighborhood Museum Repairs and Improvements

The Museum serves over 50,000 visitors each year with a wide variety of exhibits, classes, discussion groups, and other community participation services. The museum itself is a converted movie theater. Classes and other programs are held in old neighborhood buildings not originally designed for heavy visitor use. Conditions in each of these buildings do not meet acceptable functional, environmental, or safety standards. An appropriation of \$50,000 is requested for electrical and plumbing work; roof, wall, and floor repairs; improved lighting; painting; and other work.

General Building Repairs and Improvements

An appropriation of \$470,000 is requested for several Smithsonian buildings and facilities to make improvements and repairs to prevent further deterioration, ensure public safety, enhance appearance, and facilitate the program operations of the museums and galleries using these spaces.

Fine Arts and Portrait Galleries Building

An appropriation of \$160,000 is required for the following projects:

--Landscaping of the courtyard, replacement and repair of the sidewalks, and the repair and reactivation of the two fountains. This work will complete the restoration of the courtyard which was curtailed during the building renovation due to lack of funds. The courtyard has a great aesthetic impact on the building and offers the opportunity for outdoor activities in a pleasing setting (\$50,000).

--Roof repairs are necessary to forestall deterioration of the structure as well as prevent damage to art treasures housed within the building. This necessary work was deferred from the previous renovation project and should be accomplished as soon as practical (\$50,000).

--Continued pressure is developing to provide more adequate work space within the basement of the building for workrooms, production of exhibit furnishings, and for storage. The conversion of existing open area to work and storage rooms would solve these space problems adequately and improve work efficiency presently hampered by overcrowded spaces (\$25,000).

--Atmospheric pollutants continue to erode stone surfaces and structural movement has resulted in cracking and spalling of stonework. Repointing of masonry joints and weather repellant treatment of surfaces is needed to restore weathertight conditions. An amount of \$22,000 was appropriated for this purpose in FY 1973. Deferral of completing this work can only result in a more extensive and costly project at a later date(\$35,000).

History and Technology Building

An appropriation of \$150,000 is requested for the following jobs:

--This building has had a serious problem with leaks over the north entrance for several years. A major effort is required to remove the stonework of the terrace and repair the surfaces to correct the continued penetration of water into the finished public areas of the building (\$50,000).

--As a direct result of exposure to the elements the filler panels below the windows on the fifth floor level of the building have deteriorated and numerous leaks have occurred resulting in damage to interior plastered surfaces and floor coverings. This project involves removal of deteriorated materials, weather proofing and insulation of the surfaces, and installation of more durable filler panels. This work will result in reduced maintenance costs and prevent more continued deterioration (\$25,000).

--Replacement of marble steps and repair of deteriorated sidewalks. Both conditions are a threat to safety and can only deteriorate further with the passage of time. This project would remove damaged areas and replace with new material resulting in improved appearance, reduced maintenance, and correction of potential safety hazards (\$25,000).

--The installation of fire control systems has been planned to coincide with revisions of the exhibition halls to reduce the costs and length of time that an area will be out of service. This program extends the fire control work which was done following the disastrous fire on the third floor of the building on September 30, 1970 (\$50,000). This is one increment of a 5 year program estimated to cost \$250,000.

Smithsonian Building

An appropriation of \$40,000 is sought for the following work:

--This project involves the repair of existing roadways, the installation of curbs, and the replacement of sidewalks to correct deteriorated conditions and surface drainage problems. The improved appearance and reduced possibility of pedestrian injuries due to faulty surfaces make this a most important project (\$20,000).

--The deterioration of roof coverings and flashings has allowed water to penetrate into the building. Recurring repairs cannot assure a weather tight building and replacement of roofing is required (\$20,000).

Freer Gallery of Art

An appropriation of \$30,000 is needed for two jobs.

--Construction of the 12th Street underpass and utility installations along Independence Avenue have necessitated numerous excavations and subsequent patching of the sidewalks. This coupled with displacement of the sidewalk by tree roots and deterioration by the elements creates unsightly and uneven surfaces. The work will consist of removal of existing deteriorated materials and replacement with a single type of surface to improve esthetic qualities as well as remove potential pedestrian hazards. Following the completion of this work the adjacent areas will be restored and upgraded to improve the appearance of the grounds (\$15,000).

--Recurring blistering of roof covering and leakage around skylights and flashings cannot be economically combatted without removal of existing unsatisfactory materials and replacement with a heavy duty roof covering. This work is necessary for the preservation of the building and to remove any possibility of rain water damage to the objects in the collections (\$15,000).

Natural History Building

An appropriation of \$90,000 will be used for the following projects:

--The existing climate control systems utilize a single filtering media for the air intake systems. These filters cannot remove sufficient dirt particles to maintain satisfactory interior conditions since they only remove approximately 25 percent of atmospheric dust. The excessive dirt deposits cause deterioration of invaluable objects in the collections, require excessive clean-up efforts, and add to the cost of maintenance and operation of the building. This project involves the installation of a second filtering stage to the system which will reduce atmospheric dust by 85 percent and control the excessive dirt problem more efficiently. Modifications to the 10 existing air handling systems, installation of gauges and controls, and installation of high efficiency air filters will result in long term savings and provide improved environmental conditions for personnel, visitors, and the collections (\$40,000).

--This project involves the extension of automatic fire control systems to public areas, reference collection areas, offices, and workrooms. It has been planned as an incremental project to coincide with other alteration and exhibition changes that are programmed for the building. In this way a total coverage can be obtained after several years of continued work without disruption of on-going activities. The project will improve the protection of the museum objects, reduce the fire potential where burnable materials are present, and will provide a significant improvement to the safety of the occupants of the building (\$50,000). This is the first increment of a \$500,000 program.

Smithsonian Tropical Research Institute
Laboratory Building, Repairs, and Improvements

An appropriation of \$250,000 is requested to make repairs and improvements and to construct two small buildings.

In FY 1973 the Smithsonian Tropical Research Institute received a land license to a very choice site in the center of Balboa, Canal Zone. Existing on the site is a concrete structure, which has been partially renovated. Ample building space is available at the site for STRI laboratories needed for terrestrial research on the Pacific side of the Isthmus for the foreseeable future. The first stage is the utilization of the existing structure by completing its renovation for laboratory purposes by the installation of necessary partitions, utilities, services, and built-in equipment. The cost of this renovation and outfitting will be \$21,000. It is also requested that funds be provided to construct a second small laboratory building similar to the one that was provided in the FY 1970 appropriation and erected at Naos. This will be heavily used by staff, visiting scientists, and students and researchers from the local scientific community. The cost of this building, including design, is estimated at \$140,000. Built-in equipment will cost an additional \$45,000.

STRI has also received a land license to three points of land in Gatun Lake directly across from Barro Colorado Island. This area is being used for collecting of specimens, which is prohibited on Barro Colorado Island, and for studies in second growth and cleared habitats. It has become necessary to construct a small field laboratory for researchers doing work at the site. Total cost is estimated at \$20,000.

For over 40 years a number of frame buildings have been maintained on Barro Colorado Island to provide work space and living and eating facilities for scientists working on the island. Despite modern methods of wood treatment, damage caused by termites, ants, bat guano, and dry rot in the humid forest environment cannot be fully stopped. Area use of insecticides, for instance, would be anathema to much research done on the island. Despite logistical problems, future construction on the island will be mainly of concrete blocks. Nevertheless, \$24,000 is needed for restoration of existing buildings to continue their useful life. This continues a repair program begun with the FY 1971 appropriation.

Fumigation Facility in the History and Technology Building

An appropriation of \$125,000 is required to design, purchase, and install a large capacity fumigation chamber in the History and Technology Building. Using funding previously appropriated, small chambers handling objects no longer than about seven feet have been installed in the Natural History and History and Technology Buildings to guard against infestations of harmful insects that cause great damage to museum collections and furnishings. The Smithsonian has no facility to handle the fumigation of larger objects: looms, coaches, packing crates, which have been known to contain poisonous Brown Recluse spiders. A large unit is sought that will serve all Smithsonian buildings. Commercially available facilities are distant (permitting reinfestation), inadequate (lacking vacuum facilities to ensure penetration of gas into interiors), and not under Smithsonian control. Space for this large chamber exists in the History and Technology Building.

Photographic Laboratory Processing Space

Additional space specially configured for photographic processing is required to produce efficiently a growing volume of research, exhibit, and public service photography. An appropriation of \$250,000 is requested to develop such space in an off-Mall site.

Since space on the Mall is both limited and of much more value for public purposes, a site off the Mall is appropriate for developing a comprehensive up-to-date photographic facility. Approximately 9,000 square feet is required, 7,000 for a processing laboratory including color and black and white printing, processing, copy reproduction, slide and view graph production, microfilming and mural production, and 2,000 square feet for negative library and storage, which must be an integral part of the processing laboratory. Good sites are available and are now under consideration.

The requirements include design studies, air treatment, air conditioning, and temperature and humidity control; chilled, city, and hot water lines for summer-winter cross over to all processing equipment; vacuum system for negative and equipment cleaning; special lighting for darkrooms on special switches; chemical resistant walls, floors, and drains; heavy electrical requirements for processing and drying machines; built-in equipment; and relocation and installation costs.

Museum Shops Remodelling

The Museum Shops' primary purpose is to serve as a teaching tool of the Smithsonian Institution. The museums use sight, sound, music, and tactile devices to educate each visitor during his stay. The Museum Shops continue this educational process when a visitor leaves by providing him, at proper educational, age, skill, and price levels, with publications and objects that relate to the exhibits and other programs of the museum.

The Museum Shops also offer the public a familiar, store-like place where they can purchase film, games and toys for the car, and mementoes. There they can get information from friendly, frequently multi-lingual, and non-uniformed representatives of the Institution.

The growing crowds of visitors to the museums and the expanding service and educational sales programs of the Museum Shops make certain of the existing facilities inadequate. The approaching Bicentennial will bring crowds that would completely overtax existing shop facilities.

The FY 1974 budget requests \$300,000 for remodelling or construction of facilities in the Natural History and History and Technology Buildings. These improvements will permit the Shops to serve increasing numbers of visitors, increase security against shoplifting, improve efficiency, and establish physical surroundings more in harmony with the museum served. The request includes the purchase of built-in equipment.

Smithsonian Facilities Master Plan

The Institution occupies 2.7 million square feet of net working space at 20 different sites in the Washington Metropolitan area. But growth of programs, collections, work staffs, educational programs, research efforts, conservation efforts, support, protection, and maintenance needs consume

this resource totally. Growing National Collections now upwards of 70,000,000 in number are predictable consumers of major volumes of additional space. The collections, of no value if not cared for, preserved, and made available for study and sharing, demand improved and expanded housing along with associated conservators, researchers, students, and concerned public. Bicentennial emphasis simply accelerates National interest in understanding the Nation's history through its artifacts. Environmental concerns intensify demands for mining the wealth of information possessed by the National collections in natural history. These efforts demand new space. Short term solutions, partial to some of the needs, have been practically exhausted (e.g. Silver Hill, above).

Of the net working space cited above 1.7 million feet are on the Mall and it is within the Mall structures that the principle growth requirement exists. Preserving space for public exhibition and study, a prime requisite for employment of Mall space, conflicts inevitably with growth of collections and associated staffs.

Analysis of space resource needs must proceed hand in hand with dollar and manpower assessment. An apparent space requirement is for development of an effective off-Mall museum support center as soon as achievable and suitable for current needs as well as those clearly foreseeable over the immediate decades ahead. The key to an effective off-Mall center is to understand clearly the spatial and cost concomitants of interrelating the the Institution's 40 separate bureaus and organizations at 20 separate sites. The limited additional capacity for development on the Mall and on present sites must be assessed. Study must be made of spatial relationships of acquisitions, accessions, preservation, conservation, exhibitions planning, development and maintenance, reference and research, and varied administrative and support activities. In effect, an overall logistical systems analysis must be made, focusing on delineating the most efficient assemblies of activities on present and potential sites.

For the purpose of such objective \$150,000 is required to conduct the study and development of a Smithsonian Facilities Master Plan.

CONSTRUCTION
(Liquidation of Contract Authority)

1972 Appropriation	\$ 5,597,000	1/
1973 Appropriation	\$13,000,000	2/
1974 Estimate	\$27,000,000	3/

The Act of August 12, 1946, established the National Air Museum as a bureau of the Smithsonian Institution. The Congress included provisions for selecting a site for a National Air Museum building to be located in the Nation's Capital. By the Act of September 6, 1958, the Congress designated a site for a building to be on the Mall from Fourth Street to Seventh Street, Independence Avenue to Jefferson Drive. Public Law 89-509 in 1966 authorized the construction of the National Air and Space Museum. At that time approved plans were developed for the buildings construction at a cost of \$40 million but actual appropriations and construction were held up by Southeast Asia military expenditures. In the intervening years estimated costs of implementing the 1966 design soared to about \$60 million.

In order to keep the costs of this major new museum building at \$40 million, the Smithsonian Institution requested and was appropriated \$1,900,000 in FY 1972 to redesign this National Air and Space Museum. This new design was approved by the Commission of Fine Arts on May 17, 1972, and the National Capital Planning Commission on September 7, 1972.

In its report on the FY 1973 appropriation, the Department of the Interior and Related Agencies Subcommittee of the House Appropriations Committee requested that the National Capital Planning Commission conduct a thorough and intensive traffic survey to determine the extent to which construction of the Air and Space Museum will further aggravate traffic congestion in the Mall area. This study was undertaken in early July 1972 and was completed and transmitted to the Commission in early September 1972. This report made the following observations and conclusions:

1. The combined educational facilities of the mall complex will continue to attract larger numbers of visitors in the future.

2. The proposed Smithsonian Air and Space Museum will serve 5 million visitors during the Bicentennial Celebration.

3. The change in land use at the museum site will result in an improved quality of traffic service on the arterial system for the following reasons:

a. The total number of vehicle trips generated on-site during the morning and afternoon rush hours will be lower than at present.

b. Two conflict points on Independence Avenue (southbound 6th Street approach and a parking lot drive) will be eliminated.

c. The 450 visitor spaces in the museum garage will reduce unnecessary movements made by motorists seeking a parking space.

4. There will continue to be a "visitors parking" supply deficit which could best be solved by one or more off-the-mall parking facilities integrated into the Tourmobile System.

5. The shortage of employee parking in the southwest section will ease with the introduction of rapid transit service. Interim measures to solve the problem in the intervening period should be evaluated. The more intensive use of bus transit, and car pools are two such measures.

The Smithsonian and the General Services Administration have assigned a very high priority to the completion of the Museum and its opening to the public on July 4, 1976. Construction is expected to begin in FY 1972 and be completed in 1975 with an additional year for installing exhibits. The Smithsonian Institution, based on construction project funding information from the General Services Administration in late August 1972 requests that \$27,000,000 be appropriated to liquidate the balance of the contract authority on the Air and Space Museum.

1 FY 1972 \$3,697,000 was appropriated toward the liquidation of contract authority for the Joseph H. Hirshhorn Museum and Sculpture Garden and \$1,900,000 for planning the National Air and Space Museum.

2/ \$13,000,000 was appropriated for the National Air and Space Museum, plus \$27,000,000 contract authority.

3/ Liquidation of contract authority.

SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01683 0457